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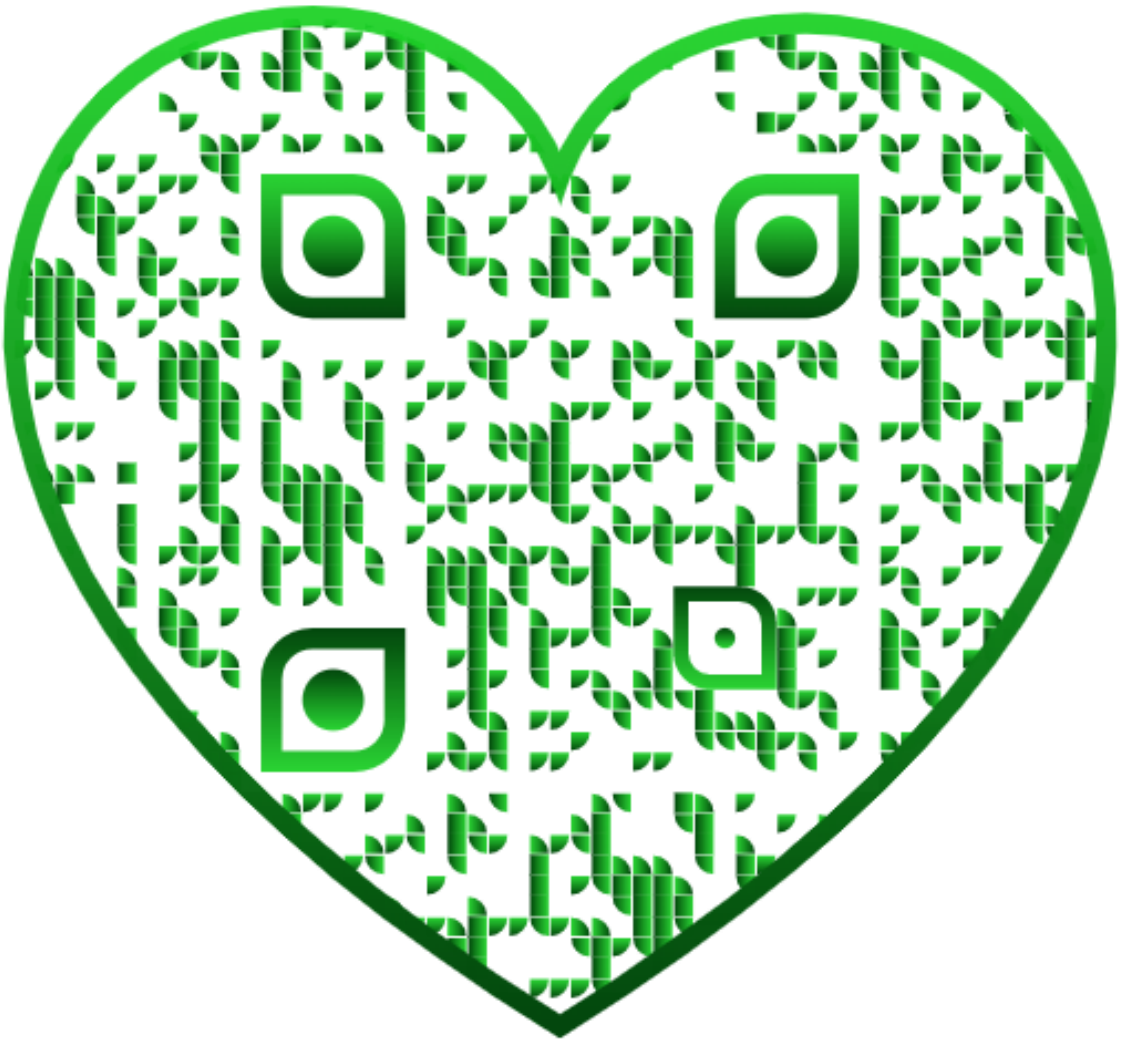

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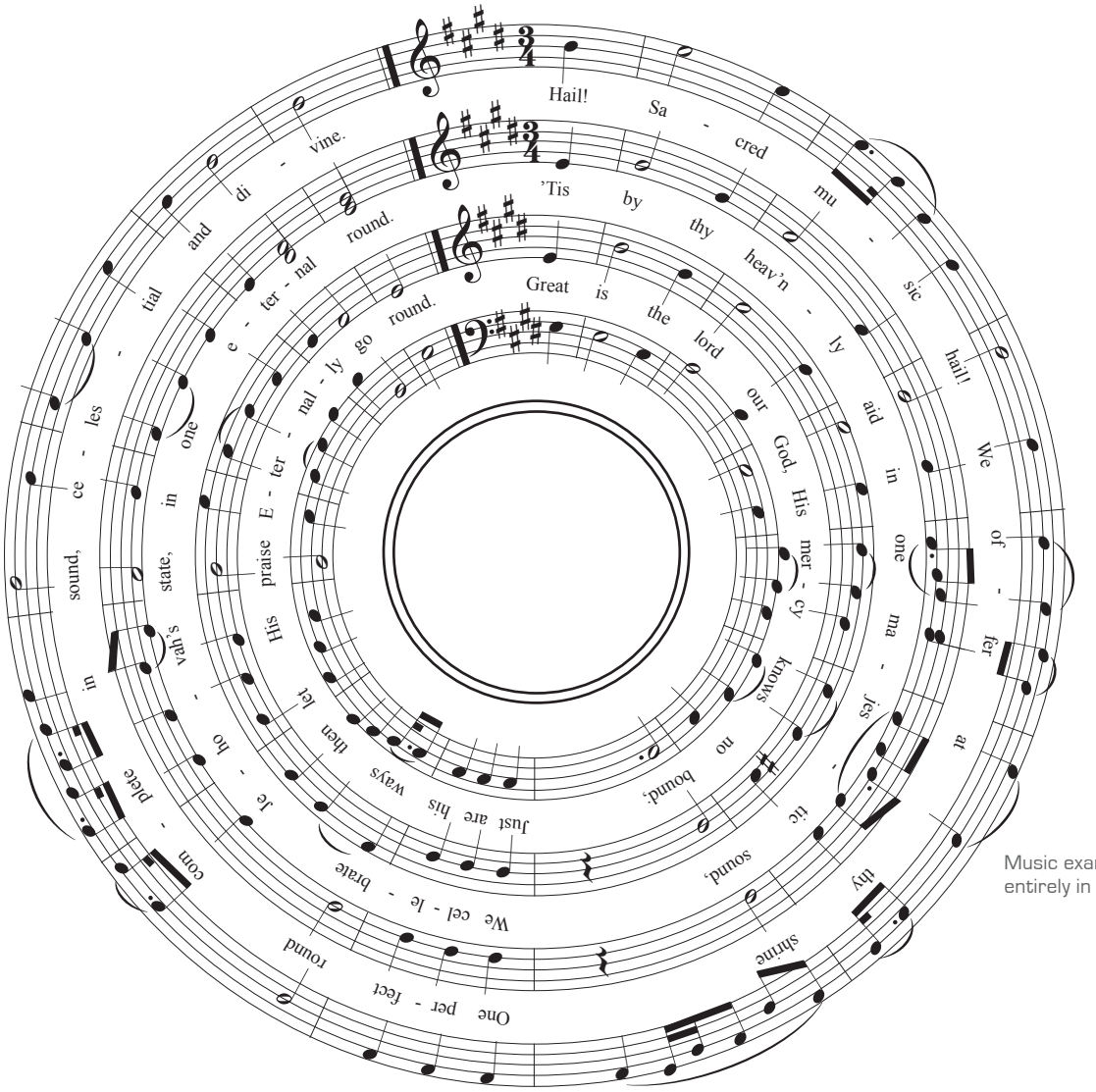

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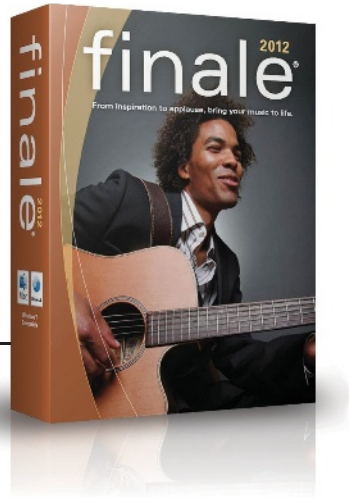

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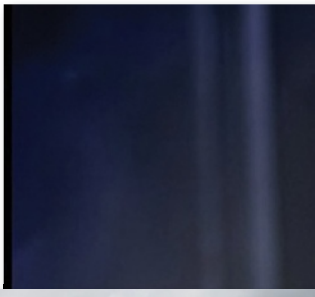

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KEYBOARD (ISSN 0730-0158) is published monthly by NewBay Media, LLC 1111 Bayhill Drive, Suite 125, San Bruno, CA 94066.

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Periodicals Postage Paid at San Bruno, CA and at additional mailing offices. POSTMASTER: Send address changes to KEYBOARD P.O. Box 9158, Lowell, MA 01853. Canada Post: Publications Mail Agreement #40612608. Canada Returns to be sent to Bleuchip International, P.O. Box 25542, London, ON N6C 6B2.

COVER PHOTO BY JEFF BENDER

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JUAN PATINO

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VOL. 38, NO. 12 #441 **DECEMBER 2012**

EDITORIAL DIRECTOR: Michael Molenda mmolenda@nbmedia.com
EDITOR: Stephen Fortner sfortner@nbmedia.com
MANAGING EDITOR: Debbie Greenberg dgreenberg@nbmedia.com
EDITORS AT LARGE: Craig Anderton, Jon Regen
SENIOR CORRESPONDENTS: Jim Aikin, Tom Brislin, Ed Coury, Michael Gallant, Robbie Gennet, Scott Healy, Peter Kirn, John Krogh, Richard Leiter, Mike McKnight, Francis Preve, Mitchell Sigman
ART DIRECTOR: Damien Castaneda dcastaneda@nbmedia.com
MUSIC COPYIST: Matt Beck
PRODUCTION MANAGER: Amy Santana
GROUP PUBLISHER: Joe Perry jperry@nbmedia.com, 770.343.9978
ADVERTISING DIRECTOR, NORTHWEST, MIDWEST, & NEW BUSINESS DEV.: Greg Sutton gsutton@nbmedia.com, 925.425.9967
ADVERTISING DIRECTOR, SOUTHWEST:
Albert Margolis amargolis@nbmedia.com, 949.582.2753
ADVERTISING DIRECTOR, EAST COAST & EUROPE:
Jeff Donnenwerth jdonnenwerth@nbmedia.com, 770.643.1425
SPECIALTY SALES ASSOCIATE: Michelle Eigan
meigan@nbmedia.com, 650.238.0325

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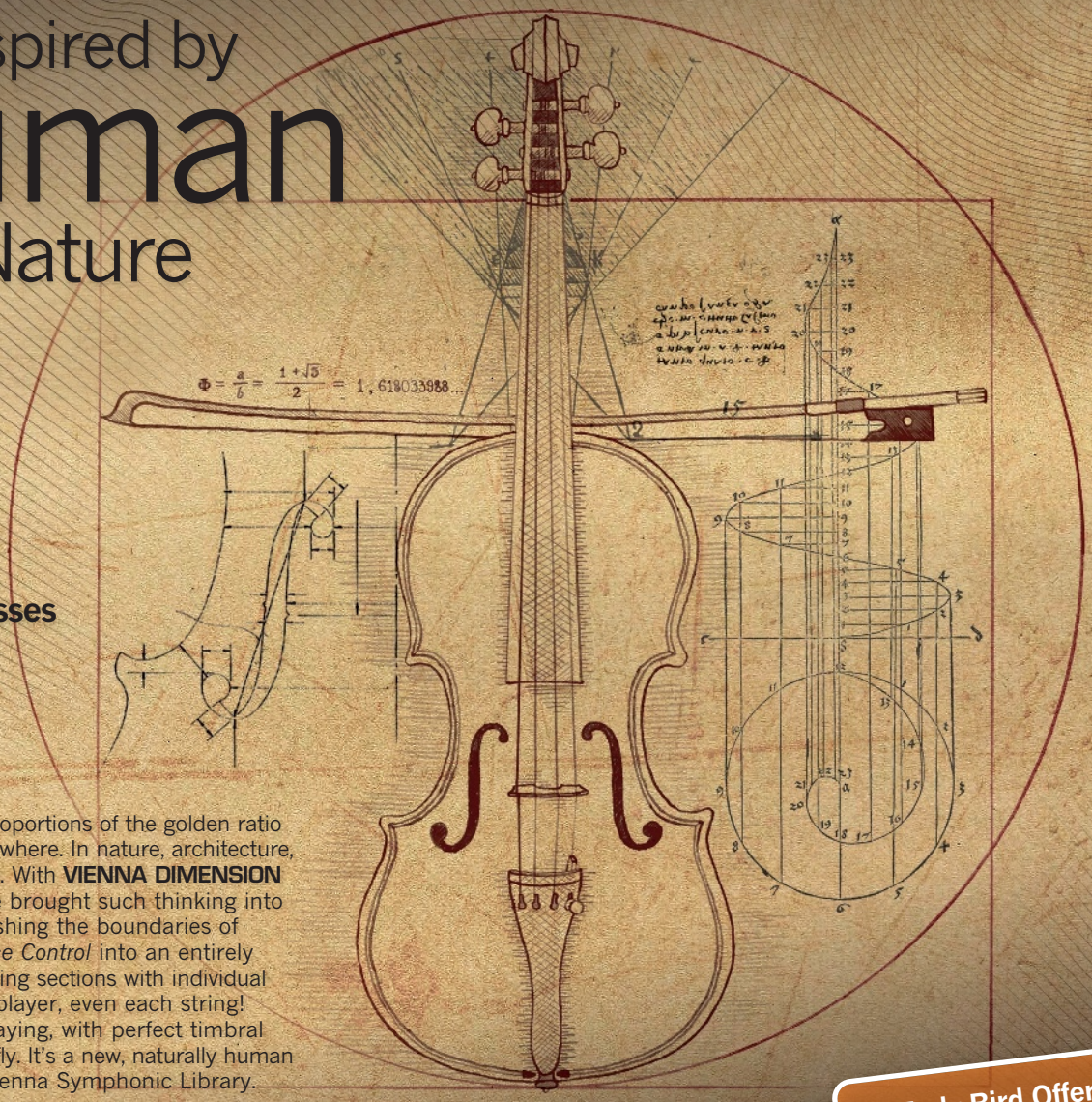

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Editor's Note

A topic that never gets old among my keyboard-playing friends is what would go into the ultimate keyboard workstation or gig machine. Now, something on which musicians, retailers, and manufacturers agree is that keyboard players are the most price-sensitive and feature-savvy guys or gals in the band. Where a guitarist (even—and perhaps especially—an experienced one) might not blink at five grand for a unique instrument that looks and plays just right, our critical brows furrow at far fewer dollars.

That's mostly good: Educated customers drive innovation and competition. However, I also hear a lot of musicians, including a former self, say things like, "It needs 512-note polyphony; a multi-touch screen; pianos, organs, orchestral sounds, and synths as good as the best software instruments; a sequencer as good as my DAW; 24-bit/192kHz output; a weighted keyboard with polyphonic aftertouch; 16 motorized faders; and a weight of 35 pounds." That *would* be awesome—and cost $10,000 on a good day. Just one of the reasons for this is that instruments are a far smaller market than, say, smartphones, so companies buy parts in lesser quantities (and those parts are less standard and more specialized), which makes the per-unit cost higher.

I won't preach. I'd much rather listen to a dialogue between industry insiders, first-time garage musicians, and everyone in between: What's the next chapter in the story of the ultimate keyboard, and what would a fair price be?

Stephen Fortner

Stephen Fortner
Editor

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My First *Synthesizer*.

Jordan Rudess

"I vividly remember the knock at my door," says Dream Theater keyboard wizard Jordan Rudess. "Two high school friends were there holding a Moog Sonic Six. I don't think my mother, who drove me back and forth to Juilliard all the time, wanted to let them in! But we made it to my room." The analog interlopers plopped the Moog on Jordan's bed, plugged it in, and asked him to play. He happily obliged. "Turning the filter knobs was a life-changing event," he describes. "Being able to shape the sound as I was playing opened up another world, and things have never been the same since." The young keyboardist then convinced a sympathetic uncle to help fund a new Minimoog. "I learned what every knob combination would do without yet understanding what the words on the knobs meant," he says. "Although the instruments I play now are incredible, I still look back at that first awakening as a great time in my life."
| **jordanrudess.com** | Michael Gallant

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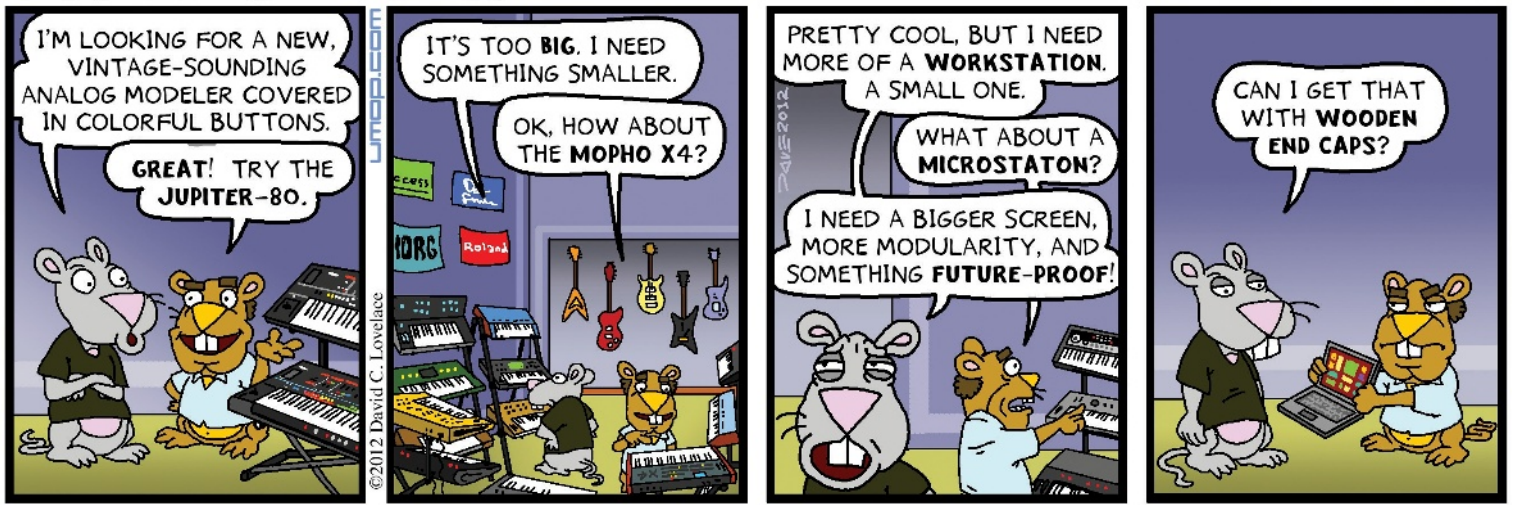

What's Next

Hey, *Keyboard*! Being able to play favorite tunes is what really holds the attention of anyone who's learning an instrument. It's where the time spent on theory and scales pays off. **Jammit** (Mac OS, iOS, or Windows) lets you download tunes, mute the part that corresponds to your axe (guitar, bass, drums, keyboards, or vocals), slow down the tempo, see scrolling sheet music, and record the results. Some keyboards do similar things, but not like this: These songs aren't clunky MIDI karaoke files—the Jammit folks go to the trouble of securing rights to the real multitrack recordings of a growing list of recognizable hits. It's like you're really in the band. (I'm not with this company; I just really thought you should check this out.) Ty Tristero**,** Claremont, CA

Key Secrets

Creative Tips for Your Gear

Key for Two. Today's keyboards offer so many performance controls—knobs, wheels, sliders, ribbons, drum pads, infrared sensors—that you may wish you had extra hands. So why not set up your instrument for two people to play at once? Try splitting the keyboard so each person plays different sounds, or have one person manipulate the arpeggiator, filter, and effects while the other handles notes and pitch-bend. You might even get inspired to build an ensemble of instruments that work together, as controllerist Moldover does when designing his JamBoxes (jamboxes.net), which are custom instruments for multiplayer performance. His Mini-Masher (shown) gives three players their own X/Y controller and drum pads, each set mapped to complementary sounds and effects. David Battino

SARAH PEET

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BY STEPHEN FORTNER

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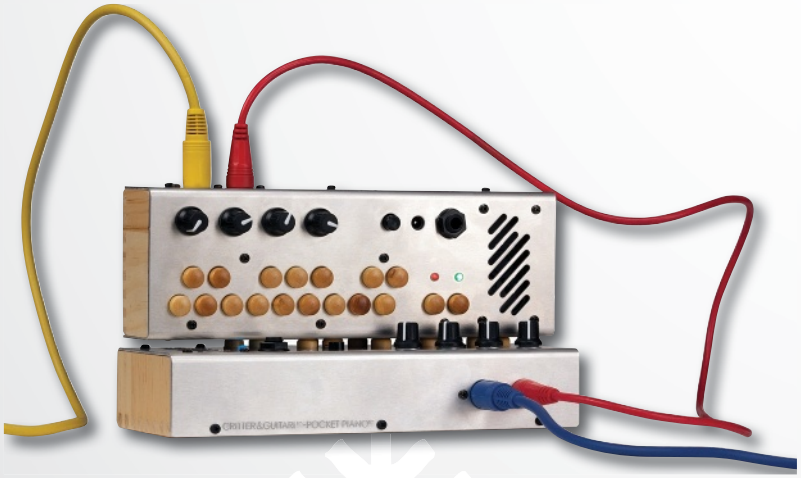

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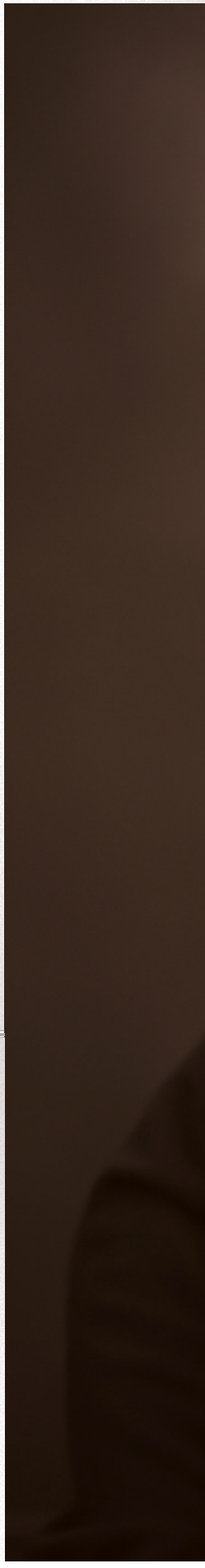
All prices are manufacturer's suggested retail (list) unless otherwise noted. Follow keyboardmag.com/news and @keyboardmag on Twitter for up-to-the-minute gear news.

"I've always been interested in figuring out how to translate energy into the piano," says Ben Folds, seated at a grand piano at New York City's Steinway Hall. *"I play a lot of wrong notes, partially because I go for things that I miss, but also because I know that dissonance creates energy."*

BEN FOLDS

BY JON REGEN | PHOTOGRAPH BY JUAN PATINO

IN THE MID-1990S, POWER TRIO BEN FOLDS FIVE DARED to put acoustic piano front and center in what was then the keyboards-aren't-cool world of indie rock, shooting to international acclaim in the process. After 13 years, they've reunited with *The Sound of the Life of the Mind*, on which Folds, drummer Darren Jessee, and bassist Robert Sledge rock with reckless abandon and precise purpose at the same time. It's a masterpiece where the visceral and cerebral collide.



Why the 13-year hiatus since your last album as Ben Folds Five?
We split up because we were working too hard. I think we started to associate the band with not having fun. When we started out, we were moving a baby grand piano into rock clubs by ourselves. We did that for three years, hauling it around in a van. I think that depicts a band that's pretty passionate about what it does. So when that passion was no longer there, we called it. I had a lot of songs, though, so I made solo records and collaborated with different people. But as time went by, we recovered. I think we also grew up a bit.

You recently said you felt pressure to make the new album really mean something. What did you mean by that?
I think as an artist, if you set out to make "the best record you've ever made," it's just not an achievable goal, no matter what point you're at in your career. For example, black and white photography from the 1940s and '50s hasn't been surpassed, in my opinion. That may be because it was what made money at the time. But so do the advances now being made in computer technology, and those *will* be surpassed. So when you're in a band, you can't relive past magic—you have to do what you're great at, at that moment. I think that requires playing completely by feel—what feels right to you, not what you think is going to market well to a certain audience.

How did the band rise to that challenge?
Part of what was exciting about making this record is that we've all gotten better since the last time we worked together. I've done a lot of arranging, scoring, and work with symphony orchestras. Robert has done a lot more playing. So when he starts breaking out of his normal space in a song, I just start lifting fingers up in my left hand. His sense of music theory is more intuitive, whereas mine is more "brainy." The combination works well. Robert hears bits and pieces of the melody and, like a good arranger, he takes them into account in terms of what he plays. At certain times in the middle of a song, he'd actually foreshadow things that happened at the end of it.

Did you write the majority of the songs on your own, or with the band?
I pretty much write everything, but there's a different editorial process with this band than what happens otherwise, and it's not something we even need to speak about. If I play a few bars of something and it's being yawned through, I'll be like, "We don't have to talk about that. Let's try *this*." We're a good committee, because if I don't respond to something positively *or* negatively, Darren might. If he doesn't, Robert might. We're each so different that if something gets by all three of us, it's probably pretty good.

Left to right—Darren Jessee, Ben Folds, and Robert Sledge.

The opener "Erase Me" seems to refute the claim that the piano can't rock as hard as the guitar. . . .
Well, the piano is a really physical instrument, but playing it more *forte* doesn't necessarily make it sound more aggressive. If you look at what a guitar player has to do physically to make a giant sound, it's minute. Even the sissiest of piano players is putting out more energy, almost like the enormous effort a tuba player has to make. So if my hand hits neighboring notes on the piano, it creates dissonance, which adds some thunder to the tone. That's why I love a real piano as opposed to a sampled one. A sampled piano is someone else's tone, and I don't know that person. I want *my* tone.

"Erase Me" also has unusual bass motion. Is this related to you originally being a bass player?
Some of it comes from that, but there's also a way of thinking about music that's kind of R&B in nature: There's a melody and a bass line and a groove, and that's pretty much it. Often, piano players think in terms of inversions, or if you're a jazzer, you define your chords by the third and the extensions you play. You don't really think about the bass. But change the bass, and you change the entire quality of the chord.

Almost like Bill Evans' early trio, there seems to be a constant musical dialogue between all of you, which is rare in pop.
I think that's probably the kindest compliment that I can think of about our record, because we *do* have chemistry, and it's acquired just like in a jazz group. You think John Coltrane or Benny Goodman didn't talk about how they fit together with their bands? Of course they did. A good example of incredible chemistry today is the band the Civil Wars. When they sing together it's just unreal.

"Michael Praytor, Five Years Later" has lush, Beach Boys-esque vocals. Can you describe your approach to vocal harmonies?
The Beach Boys owned that sound so much that when you put stacked harmonies like that on a track, you have to give them credit. But I was never a big Beach Boys listener. I'm coming to that sound more from old-fashioned arranging chops,

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and most of this kind of vocal arranging is about *avoiding* things. I made sure there were never any big leading tones doubled between the piano and the singer, that there were no parallel thirds, and that the voice movement was well executed. For instance, if I'm singing or passing through the melody and my voice lands on the third of a chord for even half a bar, that's an opportunity to have Robert singing the ninth and Darren on the fifth. When you do all of those things and you're singing "ahs" and "oohs," people think Beach Boys—but you could just as easily call it a Manhattan Transfer moment.

The record seems very "through-composed," yet spontaneous. How did you strike this balance?

We felt that there's a point where you're still discovering the music and f***ing up, but you have just enough facility that you realize you are. *That's* the take to put on the album—the one *before* the one most producers would use. We'd tie those "dangerous" takes together with serious orchestration. For example, on the song "Being Frank," I used [Elton John arranger] Paul Buckmaster for the string arrangements. I've worked with him for ten years. He's amazing. I've played his work for some people and they say, "Yeah, that's cool, it's got strings on it." And I want to scream at them, "Don't you know anything? Are you listening to what the violas are doing?" [*Laughs*.]

How did you get such a massive sound from a three-piece group?

I didn't want this record to sound like it was full of overdubs, so one of the ways we dealt with that was to set up different "scenes" for background vocals. One scene was a pair of stereo mics for all three of us to sing into. Another was a pair of stereo mics for just the other two guys. A third scene was one mono mic in omni mode for the guys to sing on either side of, and the last was each of them singing into their own mic. Having these different scenes in the same song gives you sound choices without ever having to make a mix move. You can hear it on "Draw a Crowd," where we're singing "ahs." For the big background vocals, all three of us sang all three parts, which gave us a massive spread. Then all of a sudden, the background vocals tighten up to just two people singing in mono on another mic.

What about the sustained pads in the background? Vocals or keyboards?

The band 10cc invented an "instrument" I don't think anyone else has used up until now. It consists of vocal loops, painstakingly recorded and played on the mixing console. We sang "ahs" diatonically for two octaves—all together on one mic in mono. This created awesome columns of sound that were all slightly different. Then they're spread across the console and looped for the entire length of the song. I wrote the names of the notes on the console channels, and literally played the board like an instrument. It was so inspiring that I actually thought about taking someone on tour to do it. Oddly enough, "Draw a Crowd" didn't receive any mastering. It wasn't equalized, compressed, or anything. In fact, this record was mastered at a very low level. All the dynamics were left intact.

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"Sky High" starts with a piano hook, framed by what sounds like a muted, chugging guitar arpeggio. What is that?

It's piano, with me reaching my hand inside to mute the strings. It sounds like there's reverb on that part, but it's actually my foot on the sustain pedal. "Sky High" was also interesting in that it was the big production piece on the album. The piano line was actually doubled between two pianos: the Steinway B grand used on most of the album, and an old Baldwin Acrosonic upright. I've got a lot of pianos, so I messed around with different ones until I found the one that seemed to really lock and sound spooky to me.

Were you actually thinking, "Which of my pianos would be right for this song or that part?"

Well, I initially thought that song should be played on an upright piano. So superstitiously, we went to the one I recorded "Brick" on, which is a giant, turn-of-the-century, upright grand. I bought it for 50 dollars and we made a *lot* of records on it. But it didn't work for me. I thought the song needed to sound large, not like I was trying to make an indie record, which is often what happens when you use an upright. So I went to the grand instead, and it sounded beautiful and awesome. To get more of the tone I was looking for, I snuck in a little of the Acrosonic upright in the background.

Instead of the usual verse, pre-chorus, chorus, and so on, the title track has musical interludes, drum fills, vocal call-and-response, and more. Was there a mission to break from pop song form?

I do that a lot, and then sometimes I come to my senses! What I'm always looking for is a surprise, and sometimes you find that the best way to do that is to keep the *form* traditional and surprise with the *content*. I have certain maneuvers that have now become parts of my palette. One is to cut out a couple of beats in the bars before the choruses, so that the downbeat of the chorus hits two beats earlier, which adds that element of surprise. A half-length last verse is a good one, too. That makes it sound like the singer was starting to say something else and then thought, "Screw it, it's not even worth it." That feels amazing to me, and then the chorus celebrates it even further. So I guess I do believe in song form, but for some reason, I always start by fighting it.

What is that otherworldly keyboard sound at the beginning of "Draw a Crowd"?

That's a little Casio keyboard that was brought in for pitch reference while I was recording vocals. Darren was driving me crazy the entire time playing those sound effect-like runs while I was singing, so I said to him, "You know you want it. So go in there and play it!" And that's how we started the song.

Did you start writing the song with that danceable piano riff on the intro?

That song was its own animal. We were pretty close to finishing the record—I think it was the next to last day of tracking. I was driving home and Darren texted me, "Do you know that Big Audio Dynamite song 'Rush'? We need a fun song like that." Darren's always been more of the A&R person in the band who says, "We need to have something a little more poppy." He's very good at seeing the big picture. So the next day, I started singing falsetto and playing a funky muted piano line on the bridge. We started playing that over and over again, and that eventually led me to the chorus riff.

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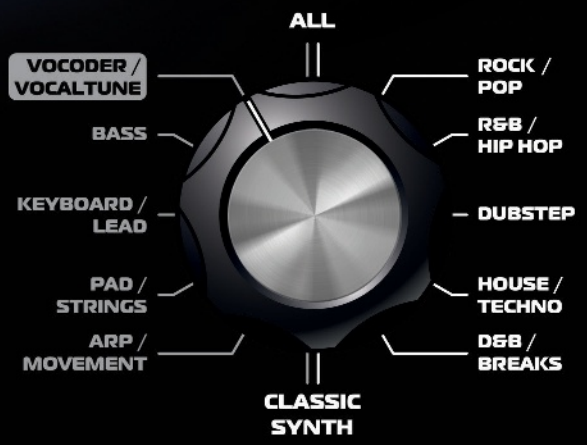

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Where did the lyric "I only wanted to be Stevie Wonder, but I had to settle for this vanilla thunder" come from?
It sounds like a joke, but when I was growing up, I almost didn't know white people played music, because all of the records I had and the ones my father brought home were by black artists. I've always had so much reverence for R&B from the '60s that I consciously try *not* to sound like it. So it's true—if I could be any musician it would be Stevie. But it'll never happen. So I'll have to settle for vanilla thunder.

What other keyboards were used on the album?
I used a 1938 Steinway B grand for most of the piano, as well as a larger Steinway C and a smaller M model from the 1920s for the song "Hold That Thought." I also used the Baldwin Acrosonic upright, a Baldwin baby grand with tacks stuck in the hammers that I used on "Away When You Were Here," the old upright from "Brick," a Wurlitzer EP, a Hammond B-3 organ, and that little Casio that was laying around.

What advice would you give to a songwriter who aspires to a career like yours?
I did a songwriting master class in Los Angeles, and I was telling the attendees, "If your song sucks, but you know deep down that your instinct was right, get your stopwatch out. Is your intro 12 to 15 seconds long? Does your first chorus hit at the one-minute mark? If these things aren't happening, make them happen. Then see if the song still sucks." Conversely, you can always point to someone who pulled off something amazing *because* there's no form. Someone once pointed that out to me about "When a Man Loves a Woman."

Fifty percent of songwriting may be what new-agers call "the universe"—the mistakes, the things you didn't expect to happen. Respect those, but don't over-respect them. You still have to enforce your will and craft things artfully, and that takes technique. That's where you put in *your* 50 percent. ♫

Ben Folds plays and discusses piano in our exclusive video from Steinway Hall.

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Editors' Choice electronic MUSICIAN 2012

Edward Sharpe AND THE MAGNETIC ZEROS

BY LILY MOAYERI

LAURE VINCENT BOLEAU

HEARING EDWARD SHARPE AND THE MAGNETIC ZEROS' SPAGHETTI WESTERN-inspired jams, you might think they were born out of a country hoedown. Instead, the Los Angeles-based collective—which at times can have up to ten members—is the brainchild of Alex Ebert, formerly of synth rockers Ima Robot. The Zeros captured audiences' attention with their anthem "Home" from their 2007 debut *Up from Below*. The evolving ensemble followed that with *Here* in May of this year. Stewart Cole and Nora Kirkpatrick, who think of themselves as the pinch-hitters of the band, mapped out the keyboard landscape over sweating glasses of iced tea on an exceptionally bright Los Angeles afternoon.

What's your studio setup like?

Stewart Cole: I've collected a bunch of analog synths and built a little world. I have a Hammond B-3 and XK3C, Prophet-5, Roland Juno-60, Korg MS-20, MiniKorg, Clavinet, Wurlitzer, a wireless MIDI controller which goes to an Apple MainStage rig that I mainly use for live performances, an old folding pump organ, and my trumpet.

Nora Kirkpatrick: I mostly play huge, stationary '70s organs that I buy at thrift stores. I love their kitsch. And I play a Suzuki Omnichord, glockenspiel, marimba, and accordion.

Did you record analog or digital on the latest album?

NK: On the first album we were dedicated to the tape machine, but it doesn't let you manipulate your sound like a modern DAW. This time we went Pro Tools. With all the very old gear, the mics, and the vintage console, we felt we could still create a "vintage enough" sound.

What was one of the stranger things you did to achieve a unique sound?

SC: We have a Leslie speaker that's really old and crusty. The wiring on it is so old I shocked the hell out of myself a bunch of times. I've never seen a Leslie that was wired as confusingly as this one, but as soon as I figured out how to put other things through it, I put everything through it. On the song "Nothing," I put a really resonant Juno, arpeggiated through the Leslie. The synth is blaring and spinning at the same time, but it achieved this particular distorted outer-space sound.

How many of the keyboard parts were recorded as overdubs?

NK: We recorded the basic parts live and then added some spice in overdub. But we've also used single takes where everyone was in one room with only a couple of mics and seven people playing, because there's definitely an inherent sound and vibe that comes from everyone playing together.

JULIE LING

SC: Almost 95% of what I play is overdubbed, because we don't always have enough isolation to record something live with the rest of the band, even though the studio has a lot of chambers. Our grand piano is out of the studio proper, by the front door. On "Dear Believer," I was playing it and couldn't see the rest of the band.

Stewart, how does your training on trumpet inform what you do as a keyboard player?

SC: The mentality I developed as a horn player—trying to find how to create what sound, what timbre, and whether or not to go for a given sound—that's that same approach I brought to keyboard playing.

Also, my brother-in-law, Patrick Warren [Lana Del Rey, Tom Waits] insisted that I play exercises, not just the way they are written in the book, but in all 12 keys. It was boring initially, but you start to be able to do a lot more than you could before. I've also learned a lot from Alex being really demanding about different sounds and the emotions to be created by those sounds. I had to really get "inside the circuitry" of those synths to achieve that.

What goes on the road with you?

SC: My XK-3C, Juno-60, and a whole bunch of pedals. I'm kind of like a pilot. I have to remember which foot is decreasing the organ and bringing up whatever else might be going on. I have an elaborate MainStage rig. There are a lot of samples, especially from the first record. For the first two or three years, nobody realized besides the keyboard player and Nora that I was making all the other sounds. I had a MacBook Pro buried off in the distance and a 25-foot USB cable to an elaborately-programmed controller for choirs, strings, Mellotron brass, all kinds of things.

I destroyed three or four M-Audio controllers. I was always throwing them on the ground because I would have to pick up my trumpet really quick, and cables would get wrapped around things. I switched to a Novation 25-key controller that could run on batteries, then eventually to wireless MIDI, which helped out my setup a lot.

NK: My new favorite instrument is the Suzuki Omnichord. It has this sound you just don't hear anywhere else—you can't strum three octaves in one second on any other instrument. The new one I got also has MIDI.

I also take my Nord [Electro]. We both play organs at different times. Stewart plays more organic-sounding organs and I'll play things that are clearly synthesized. I've been trying to find samples of a '70s Lowrey organ, and I think I'm going to sample them myself, play them from a second Nord, and see how that turns out.

It's very difficult to amplify an acoustic accordion because I get so much of the drums. On the last tour I took a Roland V-Accordion that also has organ, marimba, and many other sounds, and ran it through a bunch of pedals. Anything you could try on a keyboard, I tried on that accordion: reverb, flanger, space echo . . . it sounds nuts.

I'm also looking for a rotary effect that can be controlled by an expression pedal, so it's not always the same one or two speeds. Currently, I don't get to adjust effects while I'm playing because I really can't be turning knobs at the same time. So I'm having several pedals modified so I can adjust with my feet. That's going to take the edge off the digital and make it sound a little more analog, which is what I'm going for.

PHILIPPE MARCHIN

BEN WATERS

Bringin' Back the Boogie

BY JON REGEN

"WHAT'S A YOUNG GUY LIKE YOU DOING IN A PLACE LIKE THIS?" I JOKINGLY ask blazing British boogie-woogie pianist Ben Waters on the eve of his sold-out run at New York's famed Iridium Jazz Club. Waters and esteemed bandmates Axel Zwingenberger (also on piano), Dave Green on bass, and drummer Charlie Watts (who you may know from a little band called the Rolling Stones) make up the raucous ensemble *The A, B, C, and D of Boogie-Woogie*. Featuring a two-piano front line with Waters on vocals, the band is packing houses from Manhattan to Monaco, bringing a style of music made popular a century ago to new generations of fans.

How does a young musician in England become obsessed with an old-time style of American music like boogie-woogie?

A few things led to it. The first was that my aunt and uncle were good friends with Ian Stewart, the piano player with the Rolling Stones. So I got to hear him perform at an early age. The thing that really got me interested, though, was Fats Domino's 60th birthday party, which came on television when I was about 14. That special had *everybody* on it, like Fats, Ray Charles, and Jerry Lee Lewis. I thought, "Whoa, this is fantastic!" I started playing keyboards from that point on, trying to copy all those artists.

Later, my aunt and uncle said to me, "If you're learning piano, we still have all of Ian Stewart's videos." This was way before YouTube, and Ian had all these amazing videos of musicians like Cab Calloway, Lionel Hampton, Albert Ammons, and Meade Lux Lewis. He also had videos of his own band Rocket 88, with two entire concert films shot of his hands on the keyboard. His band was playing all kinds of swing and boogie so I learned how to play like him by watching those videos. Later on, I began checking out New Orleans pianists like Doctor John and Professor Longhair.

What was the next step in your boogie-woogie education?

In 1993, I was fortunate enough to get the call to go on the road with Rocket 88, the band that Ian Stewart formed. I was quite young and naïve at the time. I'd learned all of the tunes off the videos I'd

Watch the A, B, C, and D of Boogie-Woogie play live on *Later with Jools Holland*.
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Axel Zwingenberger, Ben Waters, Charlie Watts, and Dave Green.

watched—things like "Kidney Stew" in *B* flat. Then I'd get on the road and someone would call it in *A* flat! I was really in the deep end. I went back home after the tour and thought to myself, "I don't want to make a fool out of myself the next time. I better learn how to play in *all* the keys!"

Later on, I went on the road with a guy called Shakin' Stevens, who had five number one hits in England. I got the call to audition at the time that Jools Holland's brother Chris was playing piano for Stevens. On the audition, Chris played half the show and I played the other half. I ended up getting the gig, and that led to a longtime friendship with both Chris and Jools. We'd get together and have boogie sessions, and Jools later played on a bunch of my albums. Jools is a lot like Charlie Watts, in that he has an encyclopedic knowledge of different musical styles. I've learned a hell of a lot just by watching him play. [*Jools Holland, a former member of the band Squeeze, is the most iconic boogie-woogie pianist in the U.K. and host of the BBC show* Later with Jools Holland. *–Ed.*]

How did Charlie Watts end up in your current band?

I did a gig in Vienna supporting Jerry Lee Lewis, and I remembered that this great piano player named Axel Zwingenberger lived there. I phoned him up and we got together at his house and played piano all afternoon. Axel wanted to play in England again, as he'd done previously on a famous TV show. He suggested the two of us do some shows together. I thought it was a great idea, but as much as I liked jamming with just him, I thought it'd be great to have a drummer there to hold down the groove.

Later, Axel and I were booked into a little theater in Dorset that holds about 500 people, and we'd only sold about 50 tickets on our own. So I thought, "I'll write to Charlie." I didn't really know him, but I knew he was aware of me. The funny thing was, the television show that Axel had done in the U.K. was *with* Charlie on drums and Dave Green on double bass. So I wrote to Charlie and said, "I know you like boogie-woogie. We're doing this show. We need a drummer. Will you do it?" And he phoned back and said, "Yeah, I'll do it. I'm not doing anything else! But only if Dave Green will play bass on it." He confirmed the show about a week before the gig, and in two hours, the whole place sold out.

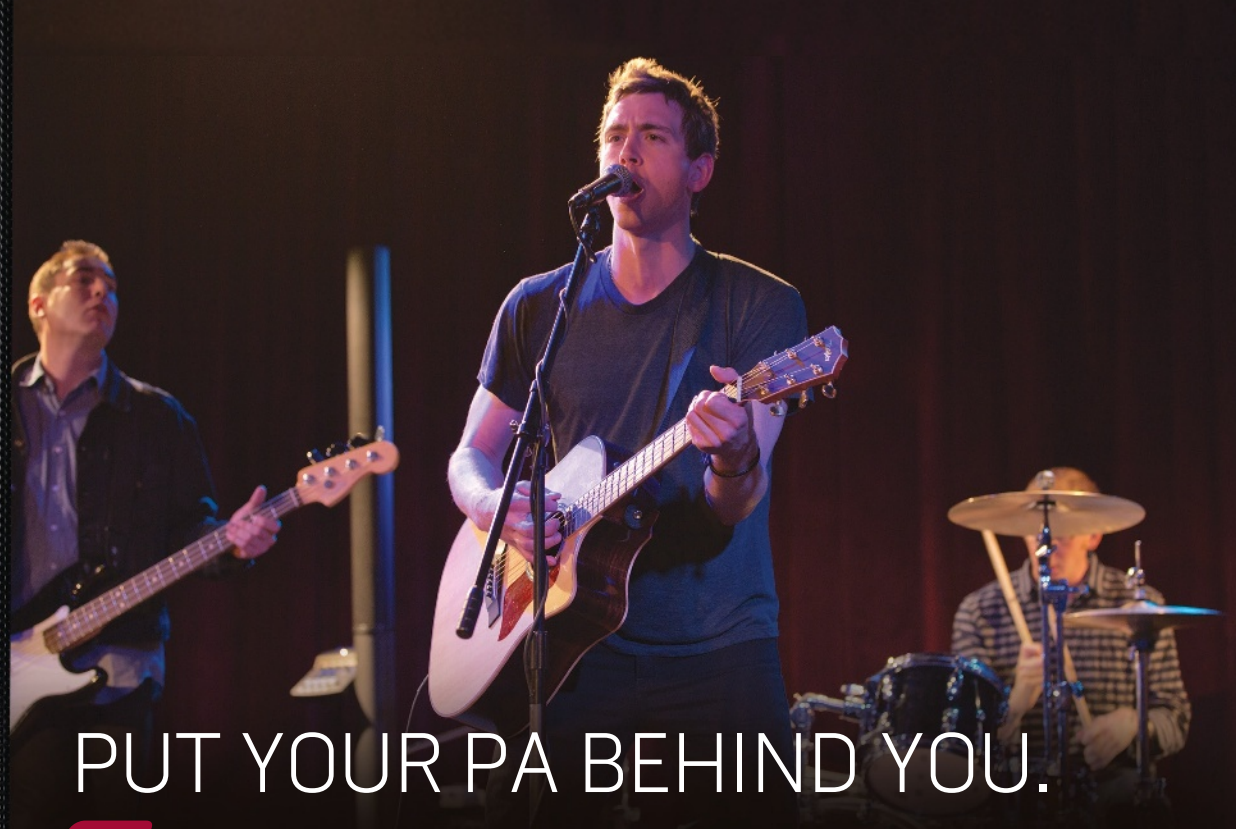
What were the rehearsals like for the first shows?

To this day, we've still never had a formal rehearsal. I'm really flattered that Charlie said "yes" to this, because he didn't have to. He has nothing to prove and could easily just stay home and relax, but he wants to come out and play music he likes. He's incredibly humble, and really has a tremendous command of different styles of music. He's got killer swing, too!

What's your advice for players who are just beginning to learn boogie-woogie?

I found that watching those videos I'd mentioned was fantastic to start learning it. But the thing that really appealed to me about boogie-woogie was that you could make quite a good sound with limited theoretical knowledge. You just need that separation between the left and right hand, with a simple left hand and a just a basic melody on top. That's a great way to begin. Boogie is a very simple style in a lot of ways, but you can go right up the scales of complexity. There are always new things to learn, like thicker and more complex left hands, stride, and so on. To this day, I'm still learning. I'll be listening to someone and think, "Wow, what did he *do* there?" ♫

Turn to page 32 for a boogie-woogie piano lesson from band member Axel Zwingenberger!



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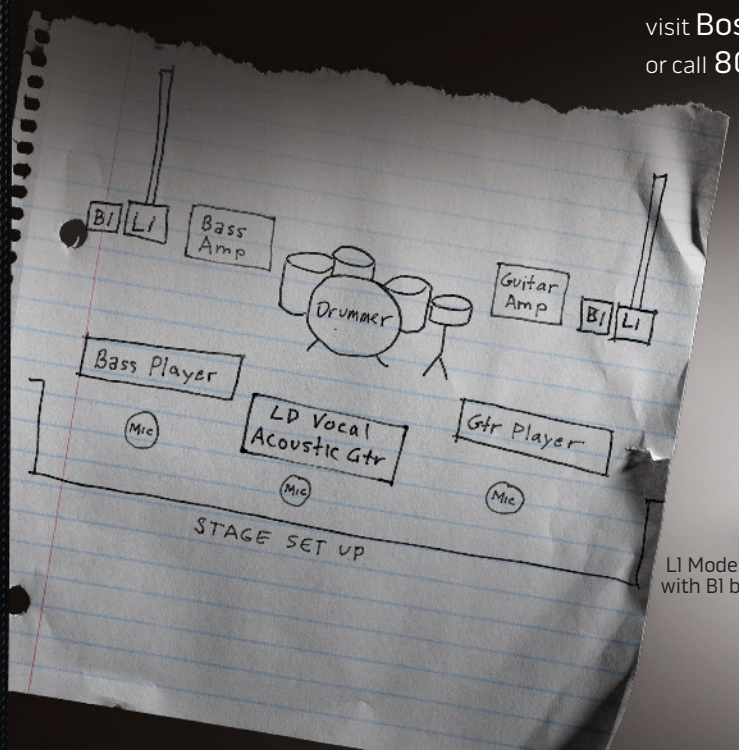

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5 WAYS TO PLAY LIKE Ben Folds

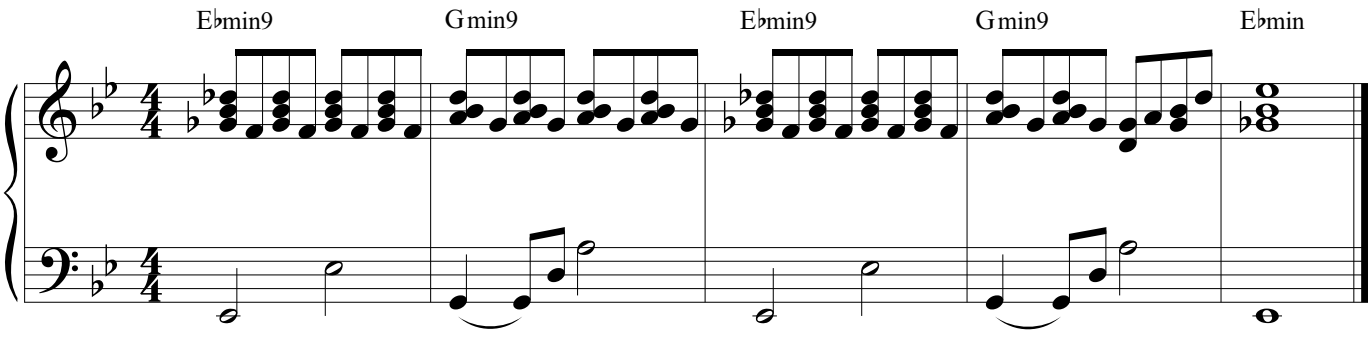
BY BRIAN CHARETTE

BEN FOLDS HAS HAD AN INTERESTING musical journey. Originally from North Carolina, he was once a bassist and popular session drummer in Nashville, Tennessee. In 1995, he arrived on the worldwide stage with his group Ben Folds Five, which soon helped anoint him as one of the reigning champions of piano-driven Rock. Ben has an eclectic piano style that's part boogie-woogie, part New Orleans, and even part classical with regard to his inventive chord voicings. His style is a tonal textbook of great rock 'n' roll piano playing. Ben has also collaborated across musical genres with a plethora of interesting artists, including author Nick Hornby and actor William Shatner. Here are five elements of Ben Folds' singular piano style that every aspiring rocker should know.

1. Paul McCartney-style Rhythm Piano

Ben will often accompany his vocals with what I call a "Paul McCartney" style piano part, as seen in **Ex. 1**. This consists of the upper fingers playing chord tones with the thumb playing the off-beat. Played as steady eighth-notes, this figure provides a great rhythmic accompaniment to his vocals. Some of the notes are harmonic extensions (such as ninths) that create compelling tensions.

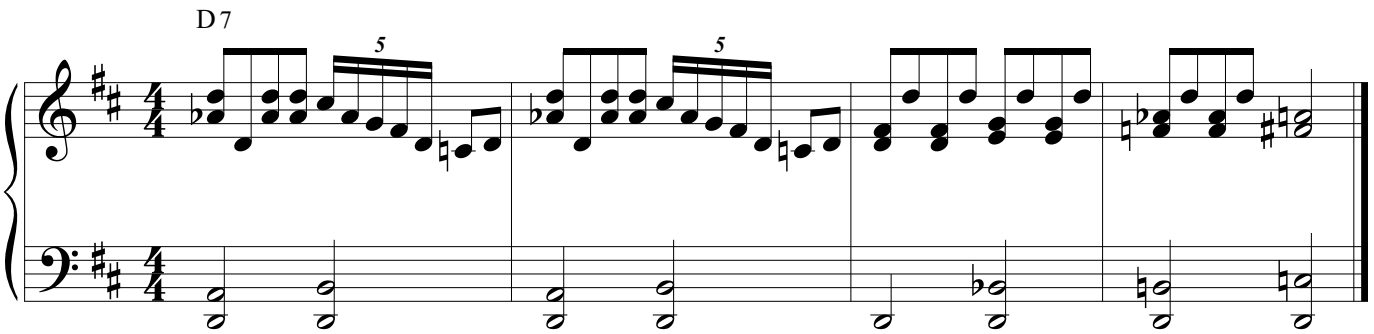
Ex. 1.



2. New Orleans Riffs

Ben commonly borrows from boogie-woogie and other early American musical styles. In **Ex. 2** we have a New Orleans-flavored piano riff. The quintuplet in measures 1 and 2 is played with a rolling motion and is *smeared* a bit. Many New Orleans pianists roll with their left hands when they play a figure like this. Here, the left-hand part contains a bit of inner motion to further support the harmony.

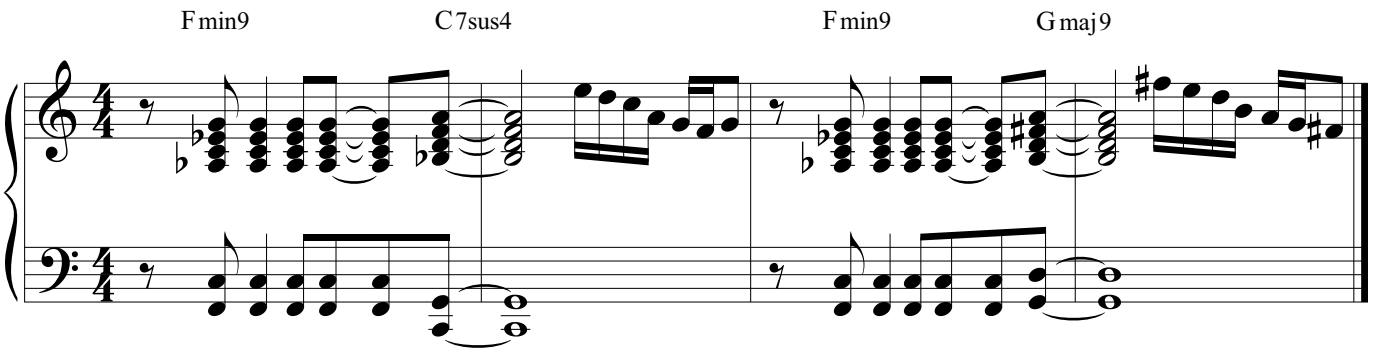
Ex. 2.



3. Jazz Chords and Fills

Folds is adept across a wide range of styles, including jazz. **Ex. 3** illustrates his penchant for this genre, with jazz-influenced chords and light fills between them. The notes used for the fills are taken from the corresponding chord scales. For example, in bar 2 they're derived from the *C* Mixolydian mode, and in bar 4 they're taken from the *G* Ionian mode—otherwise known as the major scale.

Ex. 3.



NILS WINTHER

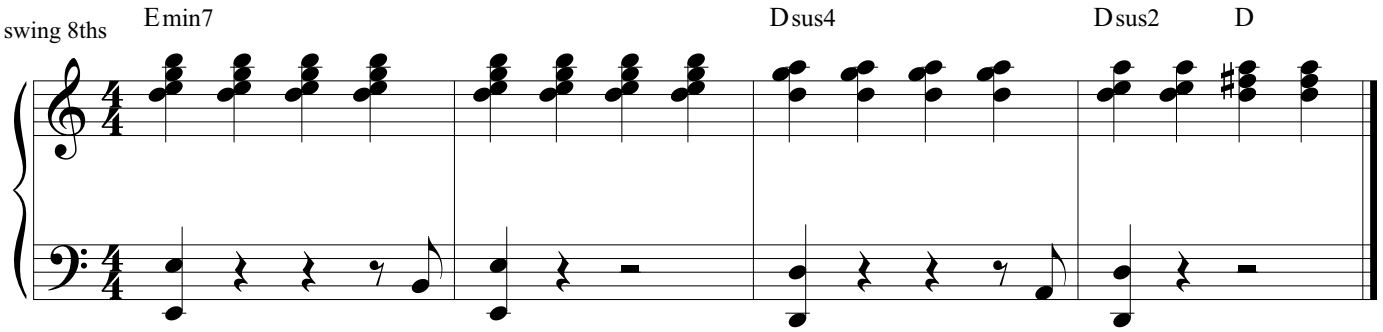
Practice Tip

"For real-world practice, transpose these exercises into different keys," says organist and composer **Brian Charette**, who has performed and recorded with Joni Mitchell, Lou Donaldson, Bucky Pizzarelli, Michael Bublé, and Rufus Wainwright, in addition to leading his own jazz groups. His latest album is *Music for Organ Sextette*, on SteepleChase Records. Find out more at kungfugue.com.

4. Suspense and Color

Ex. 4 demonstrates Folds' inventive use of color and suspense in his compositions. Here we have a quarter-note chordal figure supported by a stabby bass line. Bars 3 and 4 use the idea of suspension to create an interesting change of color in an otherwise static rhythm part. The *D* chord in bars 3 and 4 is first a *sus4* chord and then a *sus2* chord before arriving at the simple triad on beat 3 of bar 4.

Ex. 4.



5. Two-Handed Piano Tricks

Ben makes clever use of piano tricks, too, as seen here in **Ex. 5**. It's always a good idea to have a few of these under your belt. Many of his tricks involve striking the same note in succession or in unusual ways with different fingerings. In bars 1 through 4, the left hand plays the notes in the bass clef while the right hand plays the treble clef notes. In bars 3 and 4, he uses his left and right hand thumbs to play the *C*s.

Ex. 5.

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Jimmy Yancey

The Basics of Boogie

PART 1

BY AXEL ZWINGENBERGER

BOOGIE-WOOGIE IS A DRIVING BLUES piano style that features a rolling, "eight-to-the-bar" rhythm. It's based on ostinato bass figures in 8/8 time, and mostly uses the 12-bar blues harmonic scheme. While the left hand sets the pace with its sometimes-changing figures, the right hand plays often improvised melody lines or patterns using a variety of techniques such as single-note lines, tremolo, glissandi, cluster chords, and more. In a typical boogie piano solo, every new chorus will introduce a different melodic idea based on the abstract blues scheme, thus challenging the player's imagination. Boogie-woogie is credited with helping to create the styles of rhythm and blues and subsequently rock 'n' roll, which imported its signature eight-to-the-bar feel. In part 1 of this series, we'll explore two main components of boogie-woogie: bass lines and right-hand variations.

Boogie piano legends Albert Ammons (left) and Pete Johnson (right).

The author tears it up onstage with band the A, B, C, and D of Boogie-Woogie.

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1. Bass Lines

Ex. 1 is a typical boogie bass line in the key of *C*. It follows the basic blues progression, which is four bars on the *I* chord (*C*), two bars on the *IV* chord (*F*), two bars back on the *C*, two bars on the *V* chord (*G*), and finally back to two bars on *C*. A special feature here is the change of the left hand's position on the last tone of the *preceding* bar to the chord change. For example, at the end of bar 4, the last note is already on *F*, although the bar belongs to the tonic part in *C*. This creates extra drive by anticipating the upcoming chord change. Always retain a relaxed feeling when playing boogie bass lines. You'll be rewarded with a firm foundation for your right-hand improvisations.

Ex. 1.

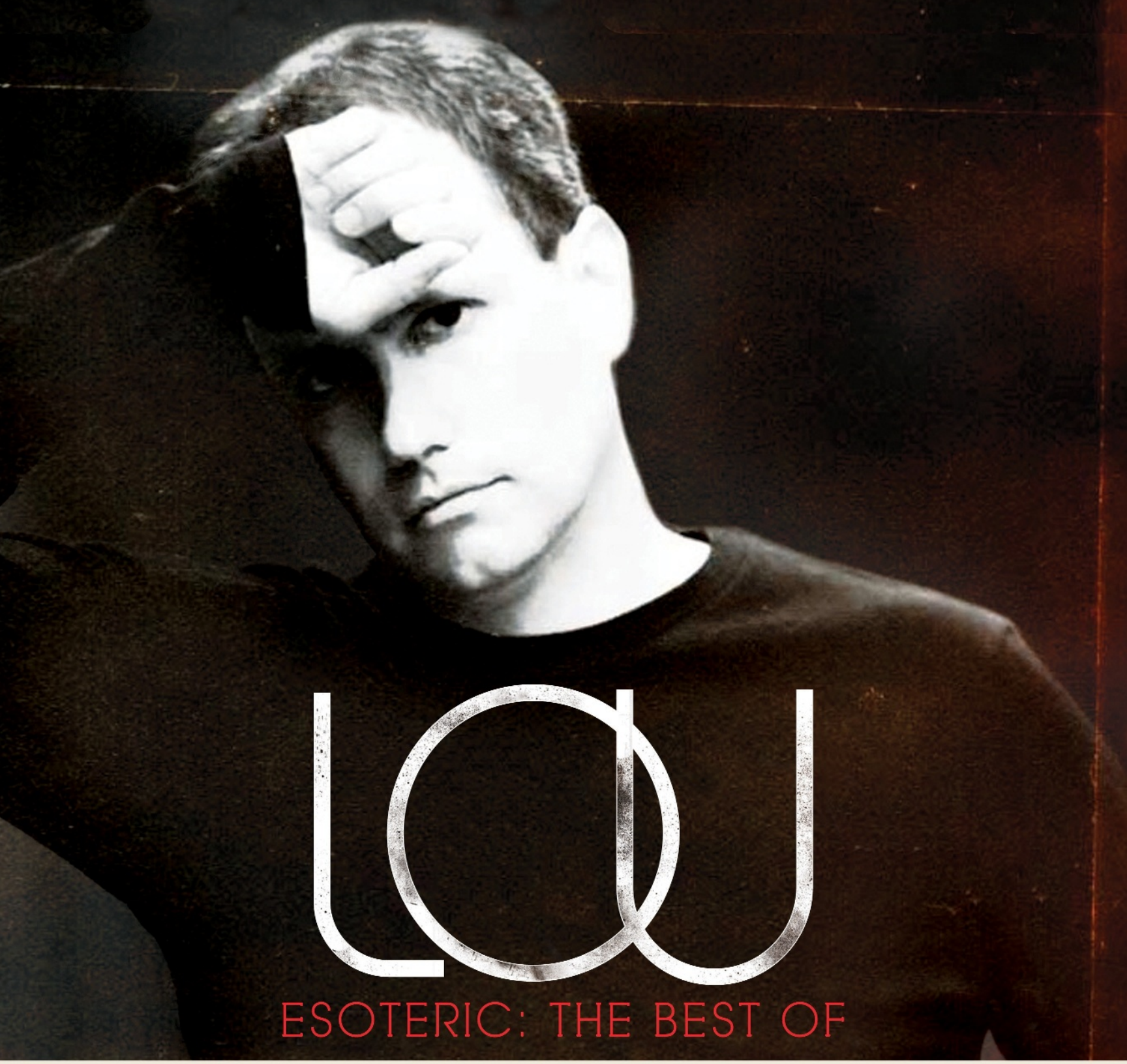
Hand-to-Hand Dialogue

"In boogie-woogie, both the left and right hands produce a constant stream of counter-rhythms, which accounts for its drive and excitement," says **Axel Zwingenberger**, one of today's leading exponents of the style. Born in Hamburg, Germany, he was heavily influenced by boogie legends like Albert Ammons, Meade Lux Lewis, and Pete Johnson. He and fellow pianist Ben Waters perform with the A, B, C, and D of Boogie Woogie, featuring Rolling Stones drummer Charlie Watts (see page 24). Find out more at boogiewoogie.net.

2. Right-Hand Variations

Ex. 2 is set over the bass line and harmonic progression of Ex. 1. It demonstrates two typical boogie-woogie right-hand features: large chords in heavy counter-rhythms to the bass line, and short glissandi, which provide a driving feel that pushes the rhythm forward while alternating with the chords. The purpose is to create a strong "off-beat" feel over the rolling bass. This is highlighted by the *C* minor chord on the first beat of the bar, which imparts the feeling of a diminished *G7* chord without actually playing one. The short downward glissandi at the end of bars 3 and 6 are executed by holding the top note with your little finger and letting your other fingers roll onto the remaining notes.

Ex. 2.



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Conversational Solos

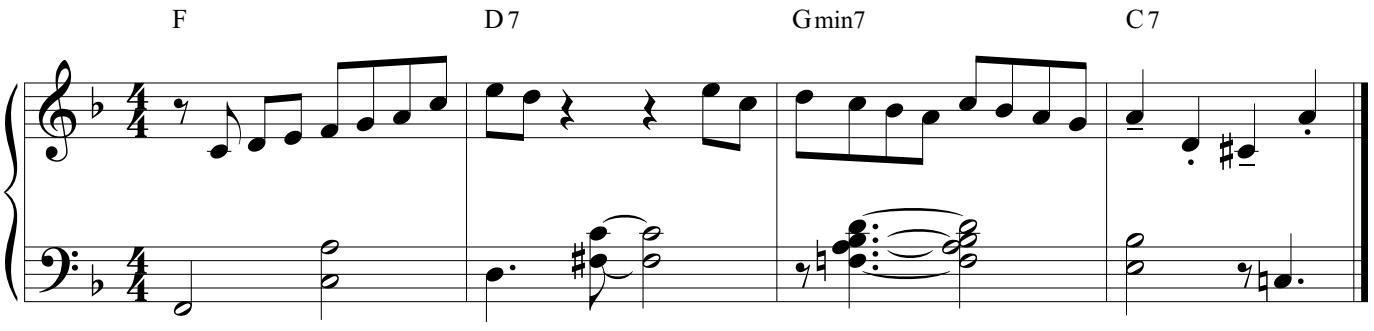
BY DAN GEISLER

AS JAZZ PIANISTS, WE DO MANY THINGS SIMULTANEOUSLY. WE KEEP TIME, DELINEATE SONG FORM, ACCOMPANY other musicians, and improvise solo lines. We log countless practice hours honing skills in each of these areas. One challenge during soloing is to be able to diverge from the "muscle memory" we've developed during our scale and chord practice, and create the sense that notes or phrases in the solo are having a *conversation* with one another. Here are a few ideas over a standard jazz chord progression, the *I-VI7-iimin7-V7* (and in the final example, a 12-bar blues) to help you build better jazz solo lines.

1. Question-and-Answer Phrasing

Phrasing can give direction to a solo by increasing idea length. Phrases can follow a common "question-and-answer" (a.k.a. call-and-answer) speech pattern, as seen in **Ex. 1**. The first half of the solo line ascends toward a high point, and the second half answers it by descending.

Ex. 1.



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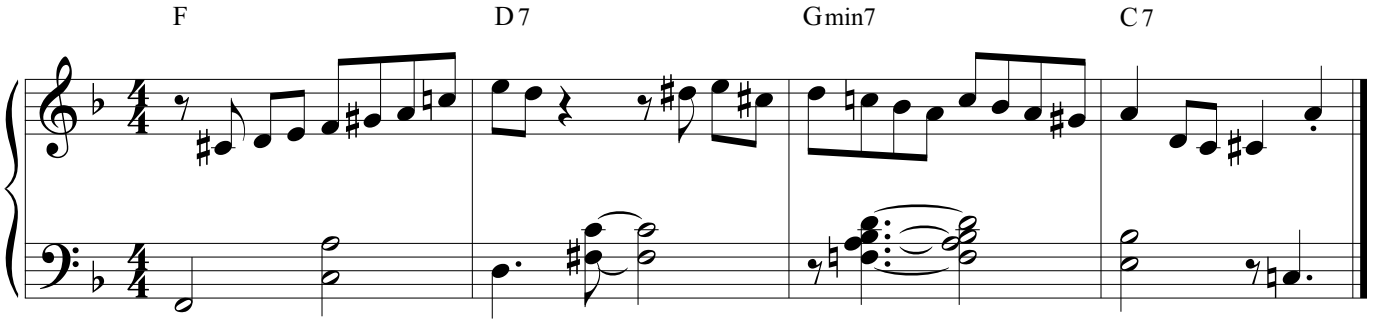
2. Recycling Phrases with Leading Tones

As the solo progresses, **Ex. 2** illustrates the effective technique of reusing phrases from earlier in the solo. This time, approach some of the notes chromatically with *leading tones* to add variety. Reusing earlier phrases can help unify your solos.

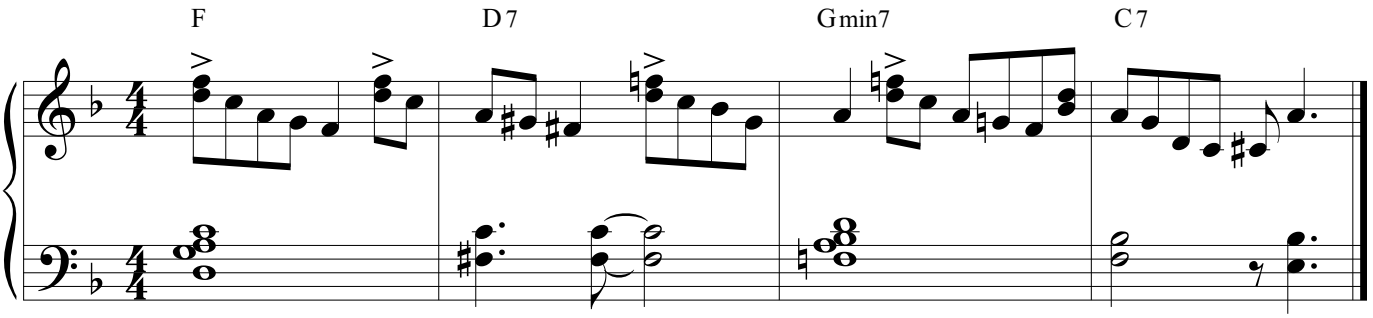
Ex. 2.



3. Rhythmic Motifs

Ex. 3 demonstrates how figures that repeat a stated rhythm can build tension in a solo. These rhythmic motifs can be any length, regardless of the time signature. In this example, the time signature is 4/4 but the motif is three beats in length. The accent mark shows the start of each new pass of the motif.

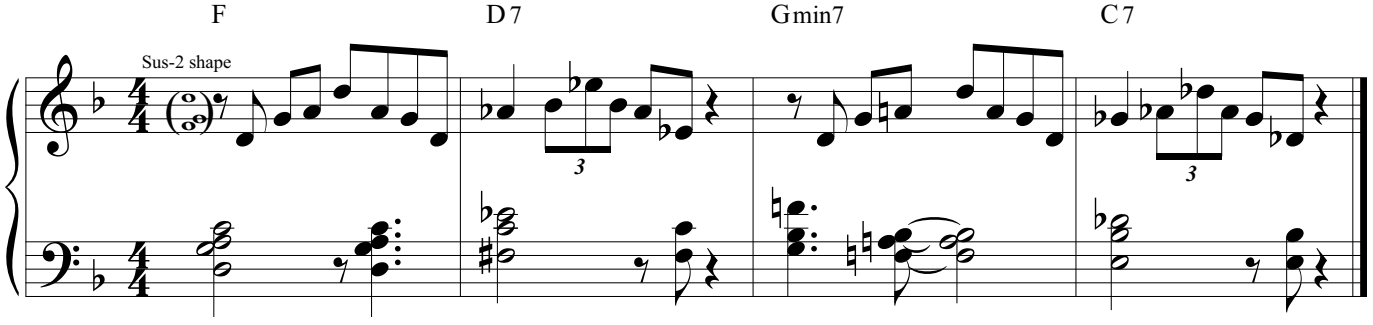
Ex. 3.



4. Melodic Motifs

Melodic motifs are seductive solo devices and are illustrated in **Ex. 4**. They can be as simple as using three-note *upper-structure* shapes as the basis for part of a solo. Upper structures are familiar chords (like *sus2* shapes, for instance) whose roots are different than that of the chord change, and whose notes come from the same scale as the chord change. For example, a *sus2* upper structure triad consisting of *G*, *A*, and *D* fits nicely over an *F* major chord.

Ex. 4.



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5. Harmonic Momentum

Strong solo lines have momentum—they push toward the next chord change, as in **Ex. 5**. Try using consonant notes (like the root, third, fifth, sixth, and ninth), for the first half of a chord change, and then move into more dissonant extensions (like flatted ninths, sharp ninths, flatted fifths, sharp fifths, sevenths, and sharp 11ths), for the second half of it. The result is often an easy chromatic lead-in to a consonant note in the next chord. This example demonstrates the concept over the first eight bars of a typical 12-bar blues progression.

Ex. 5.

Making It Look Easy

"Jazz pianists strive to know a multitude of elements well enough to interact spontaneously during a live performance," says pianist and composer **Dan Geisler**, who has worked with artists including Jon Secada and the Backstreet Boys. Geisler holds a Master's degree in Studio and Jazz Writing from the University of Miami School of Music. Geisler lives in Denver, Colorado, where he performs as a pianist and keyboardist and also writes extensively for publisher Hal Leonard's music books.

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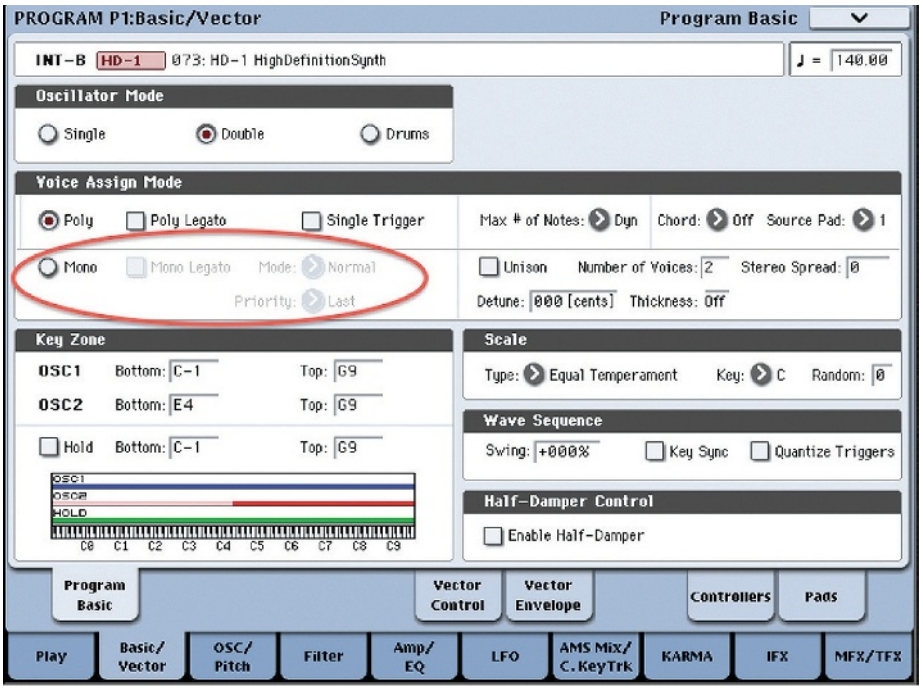

Fig. 1.

THE ART OF SYNTH SOLOING

Trigger Happy

BY JERRY KOVARSKY

WE'VE BEEN ENJOYING EXPLORING PROGRAMMING APPLICATIONS FOR THE last few columns, particularly with hard oscillator sync the last three months. Now, let's move back into performance technique as it relates to how your synth can trigger envelopes when you play notes. Understanding this will add tons of expressiveness to your soloing.

Single and Multiple Triggering

Whether your synth is velocity-sensitive or not, there are characteristics of the sound that can be controlled by your touch. I'm talking about the way the synth triggers its envelope generators based on notes that you play detached from one another (staccato), or connected smoothly (legato) on a monophonic patch. A synth that always triggers a new envelope shape for its filter or amp no matter how you play is described as having multiple triggering. A synth that won't re-trigger the envelopes when connected notes are played is said to have single triggering. This means that to re-trigger the envelopes you must lift your fingers from the keys and play a new note to get the envelope shape to affect on your sound.

In historical context, the Minimoog is famously a single-trigger synth: If you don't play detached notes, you won't re-trigger the envelopes. This can be a good thing, as it lets you introduce lines with a strong attack, while creating natural sounding phrases through subsequent notes. By contrast, the ARP Odyssey was always multiple-trigger: Every note re-triggered the envelopes. This could also be good; you could play crisply articulated phrases quickly, as it would be difficult or impossible to always lift your fingers from each note in a fast phrase. Besides the many timbral differences between these two synthesizers, this was a reason that you saw both of them in the rigs of many famous keyboard players.

Virtual recreations of classic instruments usually adhere to the original design. Korg's software Polysix is multiple-trigger, as are the Arturia (Roland) Jupiter-8V and (Yamaha) CS-80V. Both the Arturia and GForce Minimoog emulations are always single-trigger. Not sure how your hardware or software synth responds? To find out, be sure it's set to mono (or unison) mode and play a note, hold it, and trill a second note. You'll clearly be able to hear whether or not the filter re-triggers every time you play the trill note. Listen to the online audio examples at keyboardmag.com/december2012 to hear the difference.

Modern Times

Modern synthesizers—be they ROMplers, true or virtual analog, or soft synths—all approach this issue in a different fashion. They will often let you choose single- or multi-triggering when a sound is set to monophonic and/or unison. This is most frequently called legato or mono legato. When turned on it will change the envelope triggering from multiple to single. I've seen this parameter located in a main page (or block) of synth parameters. Korg has it on the Program Basic tab > Voice Parameters block of the Kronos, OASYS, M3, and M50 (see **Figure 1**), it's in a patch or performance block as on Rob Papen's Predator (**Figure 2**), and in Ultra Analog from Applied

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Fig. 2.

Fig. 3.

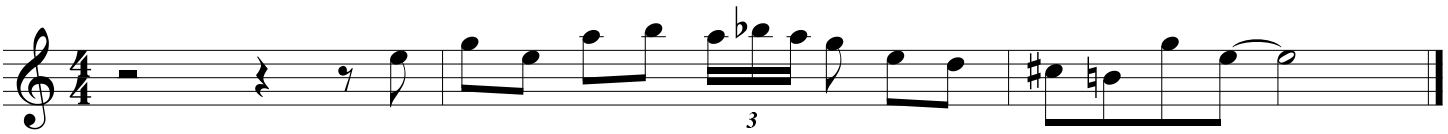

Fig. 4a.

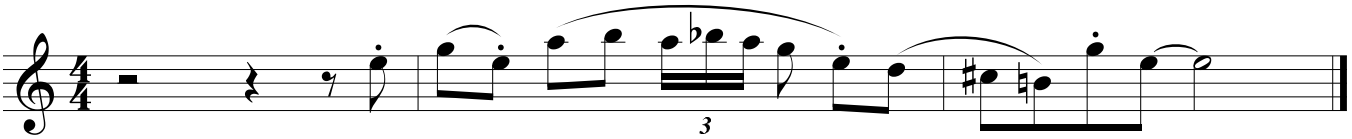

Fig. 4b.

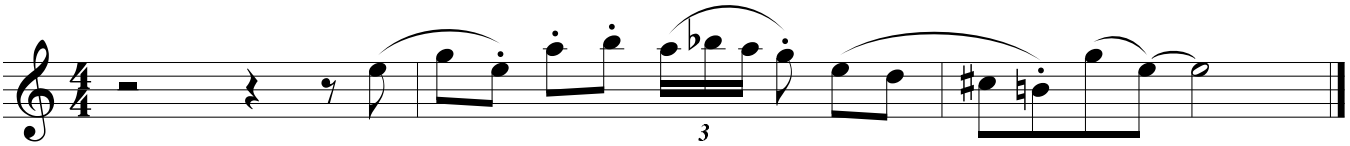

Fig. 4c.

Acoustics, it's on the filter and amp envelope blocks themselves (**Figure 3**).

To get focused on how triggering affects your phrasing, try playing the riff in **Figure 4a** with a lead sound that has a sharp attack, with your synth set to multiple triggering. Notice how each note is clearly articulated, no matter how you phrase the notes. Try playing each note detached, then try playing them as smoothly connected as possible. There should be no difference. Now turn on the legato or mono legato function on your synth. Play the phrase again with every note detached. It will sound the same as before. Except for the triplet turn in the second bar, I don't doubt that you'll have a hard time cleanly articulating those notes, especially at a faster tempo.

Now let's try varying our phrasing to connect some groups of notes, and playing others detached. Try **Figures 4b** and **4c** as suggestions; you can make up your own as well. Each staccato (detached) note will fully articulate the envelope shape, and the rest of the legato (smooth) phrase will slur or blend the tone more, enabling you to accent desired notes in the phrase. The longer you play legato phrases or hold sustained notes, the more you may find your sound getting weaker, more "smeared," or less bright. This happens when the filter envelope has a low sustain level, as your sound is settling into a darker tonality and won't brighten up again until you play a new, detached note to retrigger the envelope. No worries—just try raising the filter sustain level a little bit until your longer legato phrases sound the way you want.

I find this especially effective on sounds that have higher resonance settings coupled with a slightly slower filter envelope attack: Detached notes sweep the filter while legato notes play smoothly. Likewise, sharply attacked and quickly decayed filter shapes will offer a very percussive attack on detached notes, but play smoothly during legato phrases.

Advanced ROMpler Tricks

In synths or workstations based on samples, there are a couple of interesting concepts for mono legato triggering. Korg workstations such as the Kronos and OASYS offer the option of pre-programmed sample start offsets, where the waveform is played back some amount of time into the sample, avoiding the earliest attack portion of the sound. This can be used to avoid a click in the attack (no Hammond key click or guitar pick attack, for example) or to make a usually slow-attack sound play instantly (any wind instrument). For such instruments, the legato notes will use the sample offset point, while the detached notes will play the full sample from the beginning.

The Yamaha Motif XS and XF have a voice capability called Expanded Articulation (XA) that lets you program a separate oscillator layer within a single sound program (an "Element" within a "Voice" in Yamaha parlance) to trigger when notes are played legato, so you can completely define the nature of the smoothly phrased sound versus the detached notes. ♫

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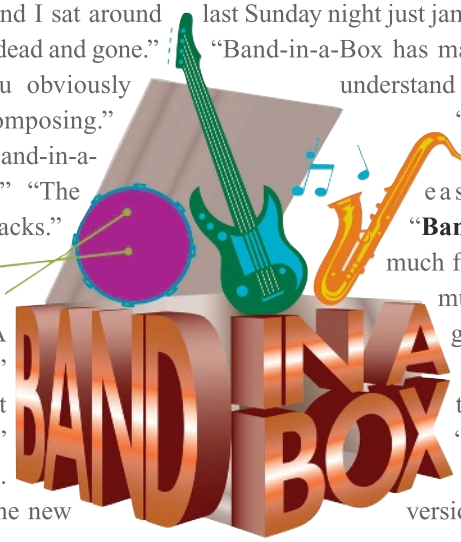

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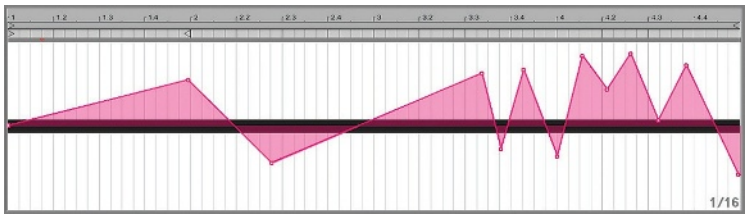
THE SIMPLEST APPROACH

BY FRANCIS PRÈVE

SIMULATING THE HUMAN VOICE IS A TIME-HONORED TRADITION THAT HAS EVOLVED WITH TECHNOLOGY over the past 50 years. One could say that it all began with the earliest *Doctor Who* episodes, with their ring-modulated Dalek voices. Followed by the talkbox, a bit of hose attached to a speaker that allowed musicians like Peter Frampton and Roger Troutman (of Zapp) to use their mouths to reshape the sound of their instruments. And of course, there's always the vocoder for classic robot voices.

Most recently, voice-like effects have returned to the mainstream, thanks in part to Native Instruments' Massive, which includes a unique wavetable called "Modern Talking." While Massive's approach to vocal tricks first found fame in the electronic dance music world (mainly dubstep and electro), it has since become ubiquitous in everything from movie soundtracks to TV commercials.

The cool thing is that you can achieve a very similar effect using very simple tools found in every current DAW. The core process for this sound is a single oscillator sawtooth, with steep lowpass filtering and full resonance, followed by a bit-crusher. That's it. Really.

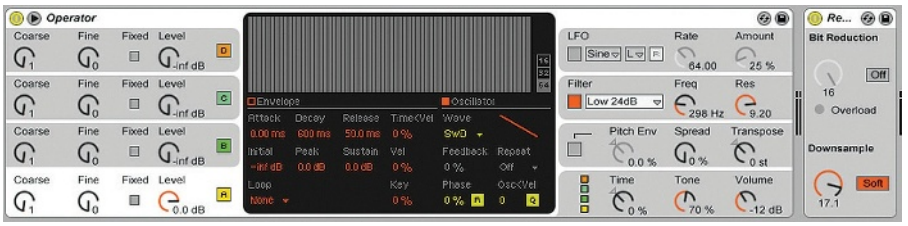


Step 1.

Start with a single-oscillator sawtooth wave and add a lowpass filter, preferably in four-pole (24dB-per-octave roll-off) mode. Then add some automation to the filter cutoff frequency.

Step 2.

Increase the resonance to maximum, right at the edge of self-oscillation. Now, listen again to the existing automation on the cutoff. At this point, there's nothing interesting or new about this sound—that's for sure.



Step 3.

Now for the secret ingredient: Add a bit-crusher as an inline effect after the synth. Start at 50 percent and try different settings. Bingo! That's "the sound."

While we used Ableton Live for this tutorial, pretty much *every* DAW includes the tools to create this effect. Here's a screenshot of the same sound configured in Reason.

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Fig. 1. *Berlin Woodwinds* sampled different musicians for each chair. Here, first, second, and third flutes are loaded, each with a different articulation patch. The original musicians are visually acknowledged—a nice touch.

THE VIRTUAL ORCHESTRA

The World of Woodwinds

BY ROB SHROCK

SAMPLED WOODWINDS ARE GENERALLY EASIER TO NAVIGATE THAN THE brass instruments we looked at last month. Their rounder attack, lighter tonal weight, and mellower timbre makes blending, layering, and mixing sounds less of a challenge. However, there are characteristic articulations and tonal combinations that are crucial to fulfilling woodwinds' role as orchestral "glue." Here are some basics.

Good Writing

In the past decade, woodwinds have been sadly underutilized. I can't tell you how many commercial TV and movie scores I hear that treat woodwinds as an afterthought, leaning instead on soaring strings, barking brass, and explosive percussion, often with clichéd and derivative results.

This was not the approach of Debussy, Prokofiev, Stravinsky, Bernstein (Elmer or Leonard), or John Williams, who all understood the crucial role woodwinds play. When woodwinds are absent, there's a sonic hole in the orchestra. Their strength lies not only in bridging the timbres between strings and brass within the ensemble, but also in highlighting and reinforcing a melody, rhythmically propelling the harmonic bed, adding flourishes and colors distinct from the other orchestral sections, and inflecting overall moods from sweet to downright disturbing.

Sections

Orchestral woodwinds typically consist of flutes, oboes, clarinets, and bassoons. They are usually written in either pairs or threes according to the numbers of players in each section. Piccolo, English horn, bass clarinet, and contrabassoon are extensions of those sections.

A limitation with many (but not all) of the brass libraries featured last month is that you are usually only given a choice between a solo instrument and an ensemble of typically three players. This makes three-part writing more difficult by either being forced to use the same "player" of a section for each part—which can sound unnatural—or resorting to mixing patches from different libraries, which can create blending issues.

The current top woodwind libraries seem to be more generous in this regard, usually giving you more solo instruments. Cinesamples *CineWinds Pro* provides a great collection of ethnic instruments, such as Irish flute, pennywhistle, soprano and tenor recorders, border pipes, Uilleann pipes, and a few baroque and Renaissance wind instruments. Orchestral Tools' *Berlin Woodwinds* goes so far as to actually provide separate piccolo; first, second, and third flutes; first and second oboes; English horn; first and second clarinets; and first and second

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Fig. 2. Both *Albion* and Cinesamples *Hollywoodwinds* lean more towards ensembles than solo instruments. World-class musicians who play on the best film scores were used. Balance control of the mic arrays are provided, and the results are quite stunning.

bassoons based on different sampled musicians for each chair, which easily allows for proper writing for woodwinds in either pairs or threes without duplicating "players" (see **Figure 1** on page 50).

Though not always appropriate, often your string melodies will sound more realistic when doubled by flutes, oboes, and/or clarinets. Depending on the passage, either a solo instrument or ensemble patches of two or three players will work nicely. The woodwind layer will slightly distract the ear from the attack envelope of the strings, which is usually the giveaway that samples are being used. Doubling brass harmonic beds with woodwinds serves both to soften the brass timbre and to add complexity to the resulting combined sound. If you're jumping between sample libraries with your brass patches, an added woodwind layer can help unify the sounds and make the patch-hopping less conspicuous.

Although not as detailed and thorough as other libraries, both Spitfire *Albion* and Cinesamples *Hollywoodwinds* (a supplemental library to *CineWinds*) provide fantastic woodwind textures, runs, and patterns that are predetermined mixes of various sections that sound extremely realistic as melodic doublers, splashes of color, and background pads (see **Figure 2**). In many instances these limited patches can actually sound more satisfying than constructing sections from individual instrument patches, due in part to the world-class quality of the players and rooms sampled. Also, they were performed as an ensemble so they already blend naturally. When used as background, the buildup of players on chords is not as "telltale sampled" as with brass and strings.

Keep in mind that woodwinds aren't always obviously present. It's not necessary to mix them up at equal levels with the strings and brass, as this will likely sound forced and unnatural. Oftentimes, a properly balanced woodwind section is barely noticeable in a *tutti* passage until you mute it, and only then is its absence really felt. Of course, solo woodwind lines that are meant to carry a melody on their own must speak properly, and EastWest *Hollywood Orchestral Woodwinds* is especially good for solo lines that need to be big and up-front or featured in a close chamber context. Listening to a variety of well-recorded orchestral scores will help put the proper balance of the woodwinds in your mind's ear. And as with all wind instruments, remember that they don't play all the time.

Timbre and Articulations

Mellow harmony beds, poignant lines, lyric melodies with vibrato, bouncy accompaniment, and harsh dissonances are all the terrain of woodwinds. Their timbre gets brighter as they play louder, though to a lesser degree than with brass. As covered last month, most of the better libraries today implement combinations of the modulation wheel and/or note velocity to crossfade and switch between multiple dynamic layers. In addition, a wind controller such as an Akai EWI or even a simple breath controller works well with woodwind samples for shaping the contour of lines (much better than with brass samples) as long as your MIDI control assignments are set up properly.

Woodwinds, like brass, are monophonic, and therefore benefit greatly from legato mode. Grace notes and ornaments are common for woodwinds, and most of the libraries provide separate patches of actual trills. Realistic trills and ornaments can be performed with legato patches; however, care must be taken in the execution. In addition to overlapping the notes to engage the legato transition sample, each note usually has to be restruck again. Only *CineWinds* and the Vienna Symphonic Library actually allow for effective trilling between a depressed key and another note.

As with brass, different libraries approach dynamic and articulation control in different ways, so get to know each library intimately to get the most out of them. ♫

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Parallel Lines

BY FRANCIS PRÈVE

BY TRADITIONAL MUSIC THEORY STANDARDS, PARALLEL MOTION MAINTAINING THE SAME INTERVAL— especially the fifth—is considered a no-no. Also, in the Middle Ages, the Catholic Church prohibited the use of the tritone (essentially a flatted fifth) in liturgical music, as its dissonant quality was thought to be diabolical or demonic. As always, rules are made to be broken.

These days, interval tuning is a staple in electronic dance music—though we'd still hazard that Torquemada wouldn't be a fan. From Deadmau5 to D. Ramirez, countless floor-filling riffs have relied on a pair of oscillators tuned to specific intervals, played in parallel. Here are a few time-tested tunings to spice up your leads.

Fifths

One of the keys to the Deadmau5 sound is the use of unusual riffs based on fifths. While the 'Mau5 has traditionally relied on the Moog for this trademark sound, you can use pretty much any dual-oscillator synth. Just set both oscillators to sawtooth and raise the second oscillator up by seven semitones. For this example, I used Reason's classic Subtractor.

Major Thirds

From quintessential techno tracks by Orbital to Greg Kobe's electro classic, "Volta," one of the cooler tricks for exotic leads is to tune the second oscillator to a major third (four semitones). Again, using Subtractor for this example, I created a basic dual square wave patch with a bit of enveloped filtering and portamento for spice.

Minor Triads

I've been asked countless times about the chord riffs in my collaboration with Wolfgang Gartner, "Yang." To be candid, we got our inspiration for its minor triad sound from classic '80s Detroit techno. Many vintage synths from that era included a "chord memory" function that let you create interval tunings to by holding a chord and hitting a button. You could then transpose the chord by riffing on one note up and down the keyboard. You can easily achieve the same effect with Ableton Live's aptly named Chord device, which can map up to six simultaneous intervals to a single note.

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NEKTAR TECHNOLOGIES

Panorama P4

BY JIM AIKIN

NEKTAR TECHNOLOGIES' PANORAMA P4 IS DESIGNED FROM THE GROUND UP to let Reason operate a lot more like a workstation keyboard or even a mixing desk. It communicates bi-directionally with Reason, has several operating modes for different Reason tasks, and has a motorized fader, which may come in handy when you're massaging your final mix.

Physical Layout

The P4 packs a lot of functionality into a lightweight and attractive package. The luxury item is the motorized long-throw fader. Next to the fader are mute and solo buttons for the selected mixer channel.

The keyboard, which senses channel aftertouch, can be split or layered into four zones, with the usual choices for what types of data can be transmitted from each zone. Around the back are 1/4" jacks for a sustain pedal and an expression pedal, and a MIDI out jack should you want to drive hardware sound modules. The white keys have a snappy, springy feel, but I found the black keys a bit spongy.

Power is supplied strictly via USB. The motorized fader is powered separately, so two USB ports are provided—one normal and one mini—along with two matching USB cables. Most of my computer's USB ports are in use, so I got the extra power from the charger that came with my iPhone. This worked perfectly.

The P4 comes with a 25-page CD-sized Quick Start guide, which wasn't completely up to date at the time of this writing, as the P4 software was still being fine-tuned. At present there's no downloadable PDF manual, just a bunch of FAQ pages in the support section of Nektar's website—and you have to register to access this.

Within Reason

Above the LCD are four backlit mode buttons: Mixer, Instrument, Transport, and Internal. Internal mode is for when you're using the P4 as a standard MIDI controller. The other three are for Reason. (See "MIDI Master Functions" on page 58 for more on the generic controller features.)

In Instrument mode, the P4 is linked directly to the synth module whose track you've selected in the Reason sequencer. Turning the data encoder knob dials through the presets within the currently active browser folder for the selected module. For example, if Malström is in its Bass folder, the P4's knob will dial through the bass sounds, but no others. Naturally, you'll see the name of the preset in the Nektar panel. By setting

up a Favorites folder for each module, you can select patches from the P4 at a gig without having to touch the computer.

Beneath the LCD are five function buttons, M1 through M5. In many situations, M5 opens up a menu. In Instrument mode, you can scroll up and down in the menu with the data knob, hit M5 again, and the LCD will change to show a new set of instrument parameters, such as the filter settings.

At this point, the eight knobs to the right of the LCD are your instrument control panel, and the LCD shows both the functions of the knobs and the current values of their parameters. This system is very easy to work with, provided you have a decent idea of how the Reason modules work. With a module as complex as Thor, the M1 through M4 buttons will also be active, allowing you to do things like step from one oscillator to another.

In Instrument mode, the first eight sliders to the left of the LCD control a couple of ADSR envelopes (assuming the instrument has two ADSRs). The ninth slider is always the master level for the instrument. Again, this is a nice touch for live performance, because these are often-used controls.

The ten Transport buttons operate Reason's transport no matter what mode the P4 is in—record, stop, rewind, loop on/off, and other commands are always available. Put the P4 into Transport mode proper, and you can move the loop start and end markers, change the tempo or the click volume level, add a new MIDI lane to the currently selected track (with or without muting an existing lane), and more. The dedicated Track+ and Track- buttons, available in every mode, step through the tracks in the sequence, and the LCD shows the name of the current track.

Mixer Mode and the Motorized Fader

Mixer mode is more complex than Instrument mode or Transport mode. In Mixer mode you can assign the P4 to Reason's main SSL-style mixer console, to a 14:2 or 6:2 mixer module, or to the ReGroove mixer.

When controlling the SSL mixer, the eight sliders to the left of the LCD control the levels of eight mixer channels. The knobs above the sliders control pan or send levels, and the buttons below the sliders can mute or solo a channel or select it for editing. When you've selected a given channel, you can edit many of its parameters using the knobs to the right of the LCD. The mixer's EQ knobs, sends, dynamics processing, and settings can all be edited directly from the P4's knobs and buttons.

If your project has more than eight mixer channels, you can step left or right through eight

Snap Judgment

PROS Works beautifully with Reason. Lots of physical controls, including a motorized fader. Four split/layer key zones. QWERTY keyboard macros for DAW control. Handsome color LCD screen.

CONS Minor setup difficulties in initial release. No cursor diamond or dedicated data increment buttons. Online-only documentation is not well organized.

The Panarama P4 is the first MIDI keyboard designed from the ground up to control Propellerhead Reason.

channels at a time using a pair of bank left/right buttons. The (non-motorized) sliders operate in "do nothing until you cross the current value" mode, and I'm told other slider response modes might be added in a future update.

The motorized fader will jump to a different physical value when you assign it to a different channel. The trick is to know where to do the assignments. The motorized fader does *not* show the fader level of the channel you've selected using the P4's mixer channel select buttons. By default, it reflects the mixer channel that corresponds to the currently selected track in Reason's sequencer. If you click on an SSL mixer channel on the computer screen, it's highlighted visually, but that has nothing to do with the motorized fader.

Presumably, the active sequencer track will be assigned to some Reason rack module, whose output will be connected to a mixer channel. And indeed, when you move the motorized fader, the mixer channel that corresponds to the instrument that corresponds to the sequencer track moves in response. Using a Lock button, you can prevent the motorized fader from switching mixer channels when you switch sequencer tracks, which is very handy.

Before any of this can happen, you have to use the Surface Locking dialog box in Reason to lock the P4 Mixer mode to a Reason mixer. You'll want to save this to your default song template to avoid having to make this setting each time you start a new project. It would be more convenient if this assignment happened automatically, but there are quite a few Reason "surfaces" that you might want to lock the P4's mixer mode to, so this system may make sense.

MIDI Master Keyboard Functions

The Panorama P4 has some very nice features for use as a master keyboard with any DAW, not just Reason. My favorite may be the QWERTY key macro function. You can assign any of the panel buttons to transmit up to eight computer keyboard strokes in a series for one-button access to some fairly complex commands, depending on what your DAW assigns to keystrokes.

In addition to user-defined macros, the P4 stores sets of function key maps. The 11 function keys are reached by holding the F-key button while pressing one of the transport buttons. The unit ships with ten different F-key maps containing definitions for F-keys that will work well with popular DAWs, including Ableton Live, Pro Tools, Sonar, Logic, Cubase, and FL Studio.

The internal memory of the P4 is structured as three types of maps: keyboard maps, percussion pad maps, and F-key maps. When you save a preset, what you're saving is, first, the assignments of the knobs and sliders; second, pointers to three of the maps. The maps themselves have to be saved separately (although this can be done quickly using a Save All command). While potentially you might forget to save your edits to one of the maps, this arrangement gives you great flexibility.

There are 20 pad maps in memory, but only five keyboard maps and ten F-key maps. A keyboard map contains four split/layer zones. It defines MIDI channel, transposition, an on/off switch, and program change and bank select for each zone, plus switches for whether to transmit pitch-bend, mod wheel, sustain, and other performance controls. Zones within the active map can be switched on or off at a gig. I would like to see more than five keyboard maps for live use, but if you're gigging on virtual instruments hosted in something like Apple MainStage or a Muse Receptor, you'll have a lot of control over zoning and MIDI CC response on the receiving end anyway.

Drum Pads

Percussion pads have become a quasi-standard feature on well-equipped controller keyboards. The 12 pads on the P4 have some sweet features that can be set up through the operating system, such as the ability to play pentatonic scales.

I had trouble with light touches producing no MIDI note, and with double-triggering. I later realized this was due to my classical piano technique: I immediately release most of the finger pressure on a key after striking it, while still holding the key down. At that point, the P4 pad thinks my finger has lifted, so a slight follow-up pressure, due to natural arm weight, is sensed as a new strike. I found the same tendency for the pads to double-trigger on my original-model M-Audio Axiom 61.

The way to play drum pads (on the P4, an Akai MPC, or anything else) is to strike firmly and then immediately jerk the arm away. Each pad can also translate after-pressure into various MIDI messages. For this, tap firmly, hold firmly, and add pressure.

Conclusions

If you're hunting for a handsome keyboard controller with a ton of functionality at a reasonable price, the Panorama P4 is worth a very serious look. If you're using Reason, its dedicated features will let you do quite a lot of recording work without ever touching the computer. Learning the workflow will take some time, and there will always be a few tasks for which you'll need to go back to the computer screen and mouse.

The major negative is the need for a thorough and organized instruction manual, and I'm hoping that Nektar will address that soon. Nonetheless, it's inspiring to see a new hardware maker enter the fray with a solid product, and the Panorama proves that Nektar is a force to be reckoned with. ♫

Bottom Line

The most tightly integrated keyboard controller if you're using Reason—and still a very nice set of keys and controls if you're not.

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DAVE SMITH INSTRUMENTS

Mopho x4

BY FRANCIS PRÈVE

WHEN IT COMES TO MODERN ANALOG SYNTHS WITH A PEDIGREE, the trinity of Dave Smith, Moog, and Tom Oberheim have led the way for the better part of a decade now. Each has their sound and strengths, so saying that one is "better" than the others is like saying that chocolate is better than bacon—I can't survive without either. In addition to my collection of vintage gear, I've had a Prophet '08 since its introduction, and the Mopho-based products have made appearances in my studio as well, so I'm intimate with the sound. Naturally, when the Mopho x4 was announced, I was all over it, so here are my thoughts.

Overview

Unboxing the Mopho x4, I was struck by how compact it is. Part of this comes from the fact that the pitch and mod wheels are on the front panel as opposed to the end of the keyboard, but that presented me with no problems soloing. Despite its size, the construction of the x4 inspires confidence. Its charcoal metal casing feels like a tank, and the retro wood end panels seem quite hardy. The velocity- and aftertouch-sensitive keyboard feels identical to the Prophet.

The front panel layout is the same as the original Mopho, which means many of the knobs have multiple functions. For example, the two oscillators share identical functions, so there's one set of knobs for both and users toggle between oscillators via a dedicated button. There's a similar approach with three of the four envelopes.

Snap Judgment

PROS Fully analog signal path. Curtis-based lowpass filters. Dual-sub oscillators, filter FM, feedback, and hard sync deliver aggressive sonics and a boatload of flexibility. Keyboard senses aftertouch.

CONS Programming the step sequencers is a tad fiddly from the front panel alone. Not multitimbral like Dave's four-voice Tetra.

While I prefer a one-function-per-knob approach, the overall design of the x4 panel is sensible and quick to master.

Flipping the x4 around, the back panel is surprisingly uncluttered. In addition to both USB and five-pin MIDI, there are stereo outs, sustain and expression pedal inputs, a headphone out (with lots of headroom, I might add) and Dave Smith's Poly Chain MIDI connector, which lets you add other Dave Smith synths, including the Tetra, original Mopho, Mopho Keyboard, and even the Prophet '08, for up to 16 voices of polyphony. (With identical sound programs loaded into each one, the master keyboard sees the whole kit and caboodle as one giant synth. Note that the Prophet lacks the Mopho line's sub-oscillators and feedback, so you'll want to avoid patches that require those if poly-chaining.) I'd like to see an input for processing external audio like on the Mopho desktop module, but implementing that on a polyphonic synth can be a little tricky compared to a monosynth.

Oscillators

Since they're based on the Mopho, the x4's oscillators are actually *more* flexible than those found on the Prophet '08. In addition to sawtooth, triangle, saw/triangle hybrid, and fully adjustable pulse waves, the x4's oscillators also include sub-oscillators for each. These generate additional square waves—either one or two octaves below oscillators 1 and 2. As a result, the x4 can deliver massive textures, especially when the main oscillators are set to octaves or fifths at higher registers. Great stuff.

The oscillators can also be hard synced, which is great for those vintage squawky leads made popular by the Cars, and that my colleague Jerry Kovarsky has been studying in the past three issues' "Art of Synth Soloing" columns. Hard sync is also super-useful for morphing and evolving riffs, especially when paired with the X4's extensive modulation.

A noise generator, located in the mixer section, works wonders for pumping up techno and electro leads. Also in the mixer section is a feedback knob, which does that nifty old-school trick of routing the synth output back into the filter. At low settings, it's a great way to add grunge and dirt to your sounds. At high settings, with a touch of detuning in the oscillators? Full-on audio mayhem.

Filter

The filters on the x4 are based on the legendary Curtis chip and are identical to those on the Prophet and Mopho, so they sound freakin' awesome. The roll-off slope can be switched between a bright and lively two-pole (12dB-per-octave) and a subjectively warmer four-pole (24dB-per-octave) mode, the later of which can self-oscillate. If you're going for that classic Oberheim brass sound, two-pole is the way to go. For darker ambient pads and screaming resonance, four-pole is the ticket.

What's more, there's an audio mod option that lets you use oscillator 1 as an FM modulator for the cutoff frequency. Boost the resonance into self-oscillation and this knob expands the x4's palette into metallic and bell-like sounds as well as sideband-heavy insanity.

The rest of the filter implementation is straightforward stuff: cutoff, resonance, keyboard tracking, and bipolar envelope amount. Can't argue with classic, right?

Modulation

Four LFOs, four step sequencers, and a slew of matrix modulation options deliver an embarrassment of riches in this department. The x4's two-line LCD keeps you informed of what goes where if you start getting lost in the knobs and switches.

The four LFOs are identical to those on the Prophet '08: five waveforms (including random), tempo sync via MIDI, key sync (for restarting the LFO every time you hit a key), and the ability to route the LFO to virtually any parameter in the x4, which is saying a lot when you start doing magic tricks with hard sync, resonance, and feedback amount.

One of the hallmarks of Dave Smith's modern designs is the inclusion of four step sequencers in almost every product. These aren't simple note-only affairs. Like the LFOs, you can assign them to an astonishing range of synth parameters. Quite a few factory presets make great use of these tools, notably "MetalNoizLoop" and "SteppingStone." Sequences can be up to 16 steps and support odd lengths, so you're not trapped in an eight- or 16-step world.

As if that weren't enough, the x4 can route the LFOs and sequencers to additional destinations, as well as serving as the nerve center for MIDI controllers like the mod wheel, velocity, and aftertouch.

With so many modulation possibilities, it's easy to get lost in the details as you tweak your sounds. Fortunately, Soundtower.com has an x4 software editor that delivers a lot of visual clarity, like their other editors for the Prophet, Mopho module, and Tetra. If you're not going too deep with your own sound design, and instead tweaking with an eye to live performance, you can easily handle it all from the front panel.

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In Use

To put the Mopho x4 through its paces, I made it sit in for my Prophet '08 for two weeks. During that time, I discovered that the Mopho sounded considerably more aggressive than the Prophet, thanks to the dual sub-oscillators and feedback knob.

On the other hand, I never really felt the same intuitive connection that I have with the Prophet '08, thanks to its plethora of single-function knobs and switches. On a Prophet, I can whip up an entirely new sound with sequences and complex LFO routings within a matter of minutes. With the x4, things go a tad slower because of all the toggling, which for most players won't be a deal-breaker, because essentials like cutoff, resonance, and envelopes are right there.

In a track, the x4 slides right into place and does a fantastic job at everything from silky pads to nasty, in-your-face leads. One of my Facebook fans commented that it's more of a "band" keyboard than a dance music tool, and while I'd gladly use it as my main lead synth in a band context, I also had zero trouble coming up with EDM sounds of all kinds and strongly recommend the x4 to any electronic producer looking for a true polyphonic analog synth.

That said, I was disappointed that Dave Smith didn't include the Tetra's multitimbral mode as a performance option, as it would have been a great way to add even more value to a feature-packed synth. Maybe in a software update?

Conclusions

You could say that the Mopho x4 is like half a Prophet '08 for half the price, but that would miss the point. The Mopho architecture has a different sound. It's way more aggressive in some ways and maybe a little leaner in others, but still light years better than any software emulation you'll find in today's market—and unlike much of the competition in the hardware realm, it's polyphonic. The simple fact is this is the most cost-effective and sonically flexible analog polysynth on the market today. Here's to another slam-dunk from a living legend. ♫

Bottom Line

Want real analog? Need polyphony? The Mopho x4 is the biggest bang for buck of anything out there.

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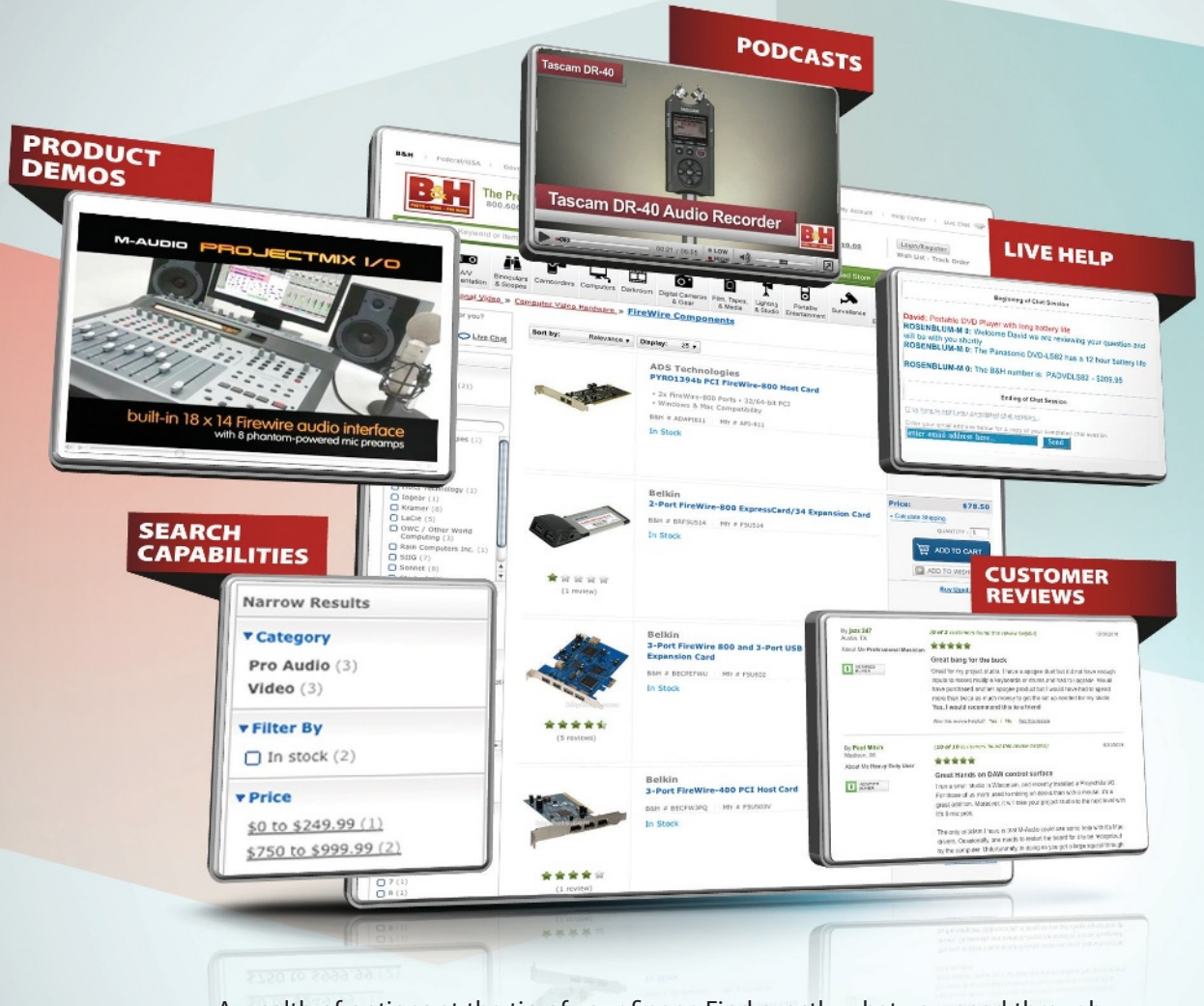

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Pianoteq 4

BY JIM AIKIN

YOU SAY YOU'D LOVE TO OWN A STEINWAY D GRAND PIANO, BUT you wouldn't have room even if you could afford one? Maybe there's room on your hard drive. And you won't even need much there—less than 30MB. Pianoteq 4 uses no samples; its stunningly realistic tone is achieved through physical modeling, it's jaw-droppingly good, it runs as a plug-in or standalone on Macs, Windows, or Linux, and you can download a free trial. Be warned, though: You're going to want a weighted 88-note controller.

What's New

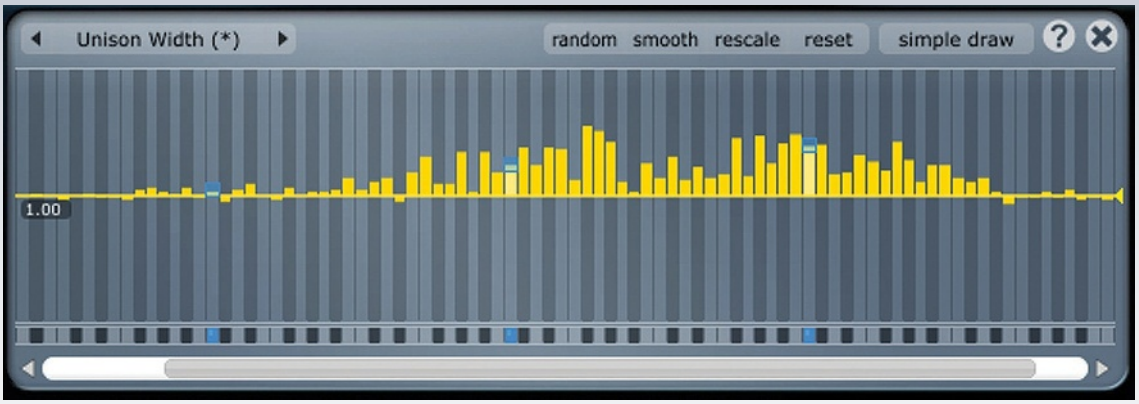
I reviewed Pianoteq 3.5 three years ago. Every word in that review is still accurate, except for one detail: The CP80 electric grand is now much improved. The big news in Pianoteq 4 is the all-new D4 (Steinway) model. I'm pretty sure a concert pianist could record a Chopin solo using Pianoteq and fool even a perceptive listener. It's that good. Plus, if you need something other than a stock Steinway, you can massage the tone extensively. Want a little more detuning in the unisons? Harder hammers? More sympathetic resonance? Longer strings? Shorter ones? With a sampled grand you couldn't do any of that that, but in Pianoteq all of these settings and more are at your fingertips. Not just with the Steinway, of course, but with all of the presets.

Upgrades in version 4 include a convolution reverb and some new effects. Compared to a synthesizer, Pianoteq is not an effects monster, but the tremolo, wah, chorus, flanger, amp simulator, and compressor are just what the doctor ordered for a Rhodes or Wurly track. Three effects of your choice, plus reverb and an output limiter, can run at the same time, and if you have reverb impulse

Snap Judgment

PROS Super-realistic sound. Detailed control over many aspects of the tone. New Steinway and optional Rhodes models.

CONS None significant.



In Pianoteq Pro, the width of unison detuning is one of many parameters you can edit on a per-note basis.

response files, you can use them. Also new are some very nice optional add-ons (see below).

The Basics

The presets include a variety of grand piano models. You can probably guess what real pianos K1 and YC5 stand for; also included are a Bechstein, an Erard, and a Pleyel. Each of these is available in several flavors: bright, close-mic, and so on. The D4 has a long list of presets, including "Cinematic," "Bebop," "Impressionist," and "Under Lid." The differences among them are subtle, but when you want exactly the right piano sound, subtle can be important.

Historical pianos from Graf and other builders are free add-ons, as are the tubular bells and carillon. The harpsichords, modeled on 18th-century instruments, are, frankly, richer and better-sounding than the real instruments I've encountered. By default the harpsichords don't respond to velocity, but you can add a response if you want. Pianoteq loads scales in the standard Scala SCL and KBM formats, ideal both for historical temperaments and microtonal experiments.

User control over the sound is microscopic. In the Pro version, you can literally edit the amplitude of every harmonic on every key, though that's not a feature most musicians will ever need. In both the Standard and Pro versions, you can change the strike point of the hammer for a richer or more brittle tone, the amount of softness added by the *una corda* pedal, the weight of the dampers, and the speed with which the high overtones die away.

Speaking of pedals, Pianoteq has four, not three. The fourth is a harmonic pedal, and when it's down, you get string resonance as if the damper pedal were depressed even though you're playing staccato. Notes held by the sostenuto pedal ring sympathetically when you play other notes of the same pitch. Fractional pedaling (not just on/off) with the damper is supported. Garden-variety MIDI sustain pedals don't transmit fractional values, so look for one that supports half-pedaling. You can also engage half-pedaling on a MIDI recording by editing controller data in your DAW.

Many of the deeper aspects of the models are not programmable. The attack and decay times of individual harmonics, for example, are hidden from the user, as is the tone color of the hammer strike. Again, that would be overkill for most musicians.

There's much more than this. The stand-alone version will do both audio and MIDI recording, for instance, and you can add breakpoints to the response curve of the graphic EQ. With the Standard and Pro versions (though not the Stage version), you can adjust the positions of the virtual mics.

Add-Ons

The Rock Collection (Rhodes, Wurlitzer, and Clavinet) is essential for everyone who ventures beyond classical music. I've always disliked sampled Rhodes, because there's often an audible break between the soft and high-velocity tones. Not in Pianoteq: The response to variations in key velocity is everything you could wish for. The Clavinet has a rich, round sound, and the barely perceptible spring reverb adds to the authenticity. By boosting its hammer noise a bit, I was able to get the kind of biting tone I craved.

The Steel Pans add-on has four instruments, including a hand-played steel drum and a metallic tank drum. For recordings that sound as if they were done on location in Trinidad, you can turn on Mallet Bounce. The tone is rich, present, and authentic; I like this add-on a lot.

The marimba/xylophone add-on is excellent. Ditto for the vibraphone. Ditto for the celesta/glockenspiel. Details that may not be obvious add to the playability—I created a celesta track with a bunch of notes of the same pitch and velocity, and heard subtle differences between the mallet strikes, exactly as you'd expect from a real player. Depending on your musical needs, it would be hard to go wrong with any of these instruments.

Conclusions

I'd have to work hard to find anything to complain about in Pianoteq 4. Well, okay, since you insist. There's a Steinway preset called "Prepared" whose heavily muted pizzicato sound doesn't even faintly resemble a prepared piano. That's hardly surprising, as you'd need separate physical models for the notes that involve bolts, washers, chains, or pencil erasers. In every other respect, Pianoteq is a total winner. Whether you're looking for a realistic grand piano, vintage electric keys, struck percussion, or a never-before-heard instrument that's equally playable, you just found it. ♫

Bottom Line

A must-have for any serious keyboardist who owns a computer. You'll want the Rock Collection add-ons, too.

***Pro*: $649 list | $519 street**
***Standard*: $399 list | $319 street**
***Rock Collection*: $119**
pianoteq.com

SOUNDCLOUD

Read our previous Pianoteq review and hear original audio clips.
keyboardmag.com/december2012

ACOUSTICA Mixcraft 6

BY CRAIG ANDERTON

MIXCRAFT HAS GONE FROM "PRETTY GOOD FOR THE PRICE" TO "it really does all *that*?" Each version has added capabilities, but without losing the ease of use and low cost that make it appealing. The original Mixcraft was clearly aimed at the "catch the inspiration while it's hot" crowd, so let's see what Mixcraft 6 has done to build on that premise.

Keyboard KEYBUY AWARD

Overview

Superficially, Mixcraft resembles other DAWs. However, digging deeper reveals the differences. For instance, there's no structural distinction between MIDI, instrument, and video tracks, as they're treated similarly. Inserting an instrument is easy; aside from the very usable preset sounds, you can load VST plug-ins or ReWire in instruments. If you want a MIDI-only track to drive an external synth, just de-select the associated instrument.

Mixcraft also lets you specify a synth's volume, pan, keyboard range, transposition, velocity range, and outputs when you insert it, so it's easy to create splits and layers. This is one of several "why doesn't every program do this?" features.

Looping and Comping

Although Mixcraft isn't a "looping program" per se, it excels in that role. The boxed version includes a library of over 6,000 loops; if you downloaded Mixcraft, selecting a loop downloads it on demand. These loops aren't filler, and Mixcraft makes it easy to put them together into a quickie music bed. When you drag the first loop into a project, you're asked if you want to conform the loop to the project, or the project to the loop—nice. Zplane's stretching algorithm (used in several DAWs) does an excellent job with tempo and pitch, and there are various loop editing options, including noise reduction. As with audio, it's easy to create and "roll out" MIDI loops.

Mixcraft does comping right, placing each part in its own lane, and making it easy to edit multiple takes into a cohesive keeper track. Play or mute any clip from within the clip itself, as well as add loop iterations by clicking the "+1 loop" button.

Video

This is a shocker, and I'm surprised Mixcraft hasn't billed itself as the "direct-to-YouTube"

Snap Judgment

PROS Nimble, efficient workflow. CPU-efficient. Comprehensive loop library and solid instrument sounds. Excellent stretching/looping support. Can define splits, layers, and effects when inserting a synth. Well-implemented comping. Shockingly good video capabilities.

CONS No mixer automation. No VST3 or REX support. Adequate, but not great, selection of plug-ins in base version. Limited mixer EQ. No Mac version.

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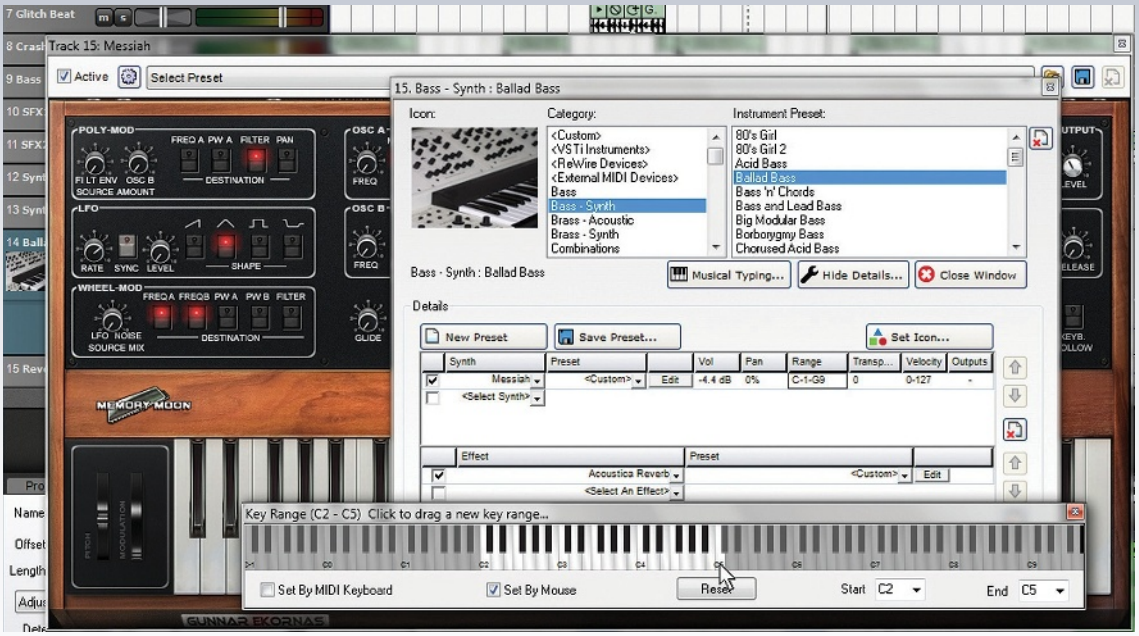

When inserting an instrument, you can specify split and velocity ranges as well as other parameters, and include effects—then save and recall everything as a preset.

DAW. You can load multiple video clips (with their associated audio) into a single video track, mix WMV and AVI formats (sorry, no MP4), and even do some editing: You can change video and audio stream lengths independently, and crossfade clips.

You can also insert still images and crossfade between them, which is ideal for "slide show" videos. These are on the same track as the video so you can mix and match. You can insert text (and even scrolling text) into multiple text lanes, and add text fades, background colors, and basic intro and outro text animations.

Not impressed yet? Try the 25 bundled video effects including brightness, posterize, color channel strength and inversion, emboss, and more. These are added to the video track just like adding automation lanes to audio, and you can automate the video effect parameters. I've never seen this kind of video flexibility in *any* other DAW.

What's Missing?

Well, there's no mixer automation. You can create automation envelopes in automation lanes, but you can't record fader movements. Fortunately, you can record MIDI controller data from a control surface to automate virtual instrument plug-ins, as well as do remote control of functions like track arming, transport control, loop toggle, and so on. This helps speed workflow, but hands-on mix automation is a *big* part of how I mix.

Many omissions are "vocal minority" features like MIDI plug-ins, audio quantizing, graphical pitch correction (although there is a pitch correction plug-in), and the like. While there's no VST3 or REX file support, you could insert a third-party instrument that plays REX files. A music staff view allows editing and printing, but it's primitive, as is the mixer's three-band EQ. Insert an EQ plug-in if you need more frequency-sculpting control.

The bundled plug-ins are generally useful. You'll find virtual instruments and plenty of effects, but there's no sampler or drum instrument other than the preset sample player versions. What's included will likely accommodate many users; if not, I'd recommend ReWiring Reason Essentials into Mixcraft. You could also get Mixcraft's Pro Studio 6 version, which adds 18 plug-ins that aren't in the base version. These include Yamaha CS-80 and Memorymoog soft synths, iZotope's Mastering Essentials, upgraded reverb, vintage and modern parametric EQs, and much more.

Conclusions

There are many "lite" versions of flagship programs. But Mixcraft doesn't deliberately leave out features to encourage upgrading, and is easy enough for novices yet deep enough to satisfy even jaded DAW jockeys. It's also a stellar way to ease into video: conceptually, video is treated like audio so there's no culture shock for musicians—nor will you feel limited when starting out. And yes, online music with videos gets a lot more views than the audio-only kind.

Many little touches show that serious thought went into Mixcraft. Hover over a track's FX button to see a list of inserted effects; right-click on it, and the GUIs for all effects open up. Every track has a built-in tuner, MIDI editing (including drum maps) is greatly expanded from previous versions, and every time you save a file, Mixcraft generates a backup. Why doesn't every program do this?

Mixcraft's fans got me interested in this program in the first place, and I can see why. You really can't get any more for any less, and you get much more than you'd expect—making this a no-brainer of a Key Buy. ♫

Craig Anderton is Executive Editor of Electronic Musician *magazine and Editor in Chief of HarmonyCentral.com.*

Bottom Line

Far more DAW than you'd expect at this price, and extremely user-friendly at that.

***Base version*: 84.95 boxed | $74.95 download | *Pro Studio version*: $149.95 download**

acoustica.com

SOUNDCLOUD

Watch Craig Anderton's Mixcraft 6 instructional video.
keyboardmag.com/december2012

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Level 42 co-founder Mike Lindup's rig includes a Nord Lead 2 above a Roland RD-300SX stage piano, and a Dave Smith Prophet '08 atop a Rhodes.

5 THINGS I'VE LEARNED ABOUT Killer Keyboard Parts

BY MIKE LINDUP

I'VE BEEN INFLUENCED BY EVERYTHING FROM JAZZ, POP, FUSION, AND FOLK to classical, Latin, and African music. I studied classical piano and percussion, played in orchestras, sung in choirs, and played drums in a college cover band before helping to form Level 42. Thirty-two years later we're still going strong. Here are some things I've learned along the way about creating compelling keyboard parts.

1. Every Song Is Unique

Always approach each individual tune as a chance to create something new. Listen to how the music and lyrics make you feel and play accordingly, instead of just saying to yourself, "Ah, this song is in 'X' category, so I need my 'X' chops or sounds."

2. Be Open Minded

In a group, the producer or other musicians may ask you to emulate an instrument or style that may be completely different than what you personally hear. Go with it. Many of the keyboard parts that [Level 42 keyboardist and co-producer] Wally Badarou and I came up with started from ideas that seemed pretty weird at first.

3. Less Is More

If your rhythm section is cooking and filling up frequency space, what often works best on keyboards is a melodic or rhythmic motif with *space* between the phrases. Counter-melodies are great as well. As the keyboardist, you're the strings, the brass, and more. Take time to look for sounds that impart intriguing, infectious colors to the track.

4. Keyboard Conversation

Don't just stick around the middle of the keyboard. Use both hands, or try just the left hand sometimes. Create a call-and-answer dialogue between two different sounds (say, Rhodes and synth). In the studio, I like to have more than one keyboard record-ready for this very purpose.

5. *You* Need to Dig It

Within reason, *your* personality needs to be able to express itself. If you feel that you're playing the "right" thing, but it's boring, stop and try something else. If you enjoy what you're creating, then others listening to you will be drawn in as well. ♫

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HS10W

HS Series Powered Monitors

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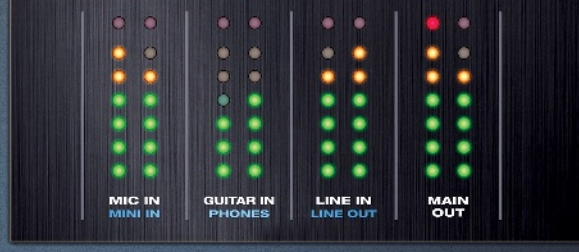

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DSP-driven mixing and effects

Track16 is a 16-bus digital mixer with reverb, EQ and compression.

Optional breakout box

Same I/O as the Track16 cable in a compact breakout box.